# Xprint Frequently Asked Questions

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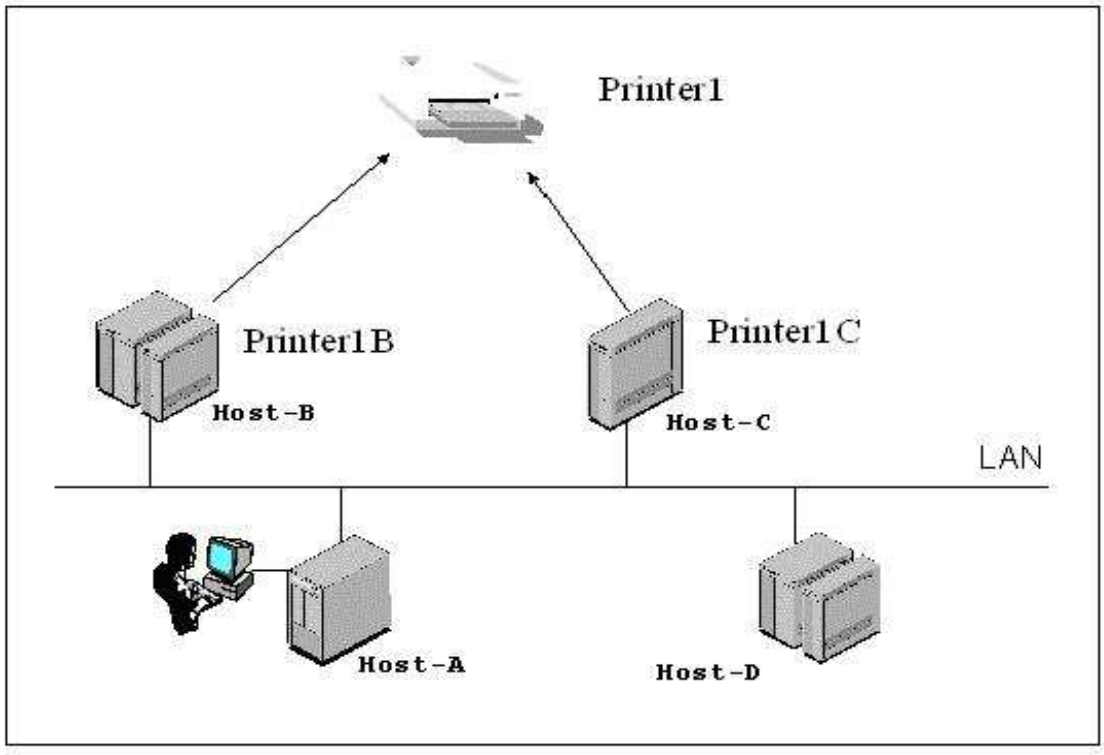
# A. Xprint – Generalities

## *A.1 Backup Server*

Xprint provides internally two features ensuring a basic high availability: the device group for the printing and the replicated database mechanism for the product management.

The device group is an Xprint resource providing the possibility to associate a set of printing devices with a logical name. The usage of this name as print job destination automatically requests Xprint to use the best fitting device belonging to the list. Therefore, if the same physical printer is defined on several Xprint hosts, this printer will be accessible as long as one of these Xprint hosts is running.

The following picture presents this feature: The printer is LAN connected and is defined on both Xprint hosts "Host-B" and "Host-C". The device group name is "Printer1" and gathers the two devices "Printer1B" (printer definition on Host-B) and "Printer1C" (printer definition on Host-C). By this way, a user or an application residing on Host-A and using the destination name "Printer1" can access the physical printer as long as "Host-B" **or** "Host-C" is running.




## *A.2 Compatibility of shell scripts that use Xprint commands*

The variable XP_VR is offered to guarantee the compatibility of existing shell scripts with the current Xprint version.

This variable defines the version number that is used when generating the display. The form of the display was different in earlier versions of Xprint. Consequently, shell scripts or applications that use the output from an earlier version may not be compatible with the current version.

XP_VR can have the following values: 04.2A00, 04.2B00, 05.0A00, 06.0A00 or 07.0A00. The format of the installed version is used.

For example, if you have a shell script that uses the output from the

## A.3 How to configure a Xprint domain ?

The steps to configure a Xprint domain are the followings:

1. Create an entry "Xprint_db" in the file `/etc/services:`

   ```
   Xprint_db xxxx/tcp
   ```

   where xxxx is a port number which must be the same on all the hosts belonging to the domain.

2. Install Xprint and the licence on each computer.
3. On the first host of the hierarchy, execute the DBinstall command:

   ```
   $XPRINT_HOME/bin/DBinstall
   ```

   Answer YES to the question 'is it the first configuration ?', and ATT for the system type.

4. Start Xprint on this host.
5. Define the other hosts of the domain, with

   ```
   xpadd -hos <host_name> -re <responsibility>
   ```

   where <host_name> is the host name as defined in `/etc/hosts,` and <responsibility> is "POTENTIAL_MASTER"

   or "SLAVE"

6. On the other hosts newly defined, execute the DBinstall command:

   ```
   $XPRINT_HOME/bin/DBinstall
   ```

   Answer NO to the question 'is it the first configuration ?', and giving the name of the first host started.

   As an alternative, you can also use the parmeter "h" of the DBinstall command like this

   $XPRINT_HOME/bin/DBinstall -h

7. Start Xprint on the other hosts.

## A.4 How Can I change the left margin values on header & trailer pages ?

For instance, let's see how to have a left margin of 0.4i, on a device using the PJL-PCL5e pcl.

- first create a new PCL similar to the PJL-PCL5e

- modify some capabilities: pboj, pbod, peod with the left margin sequence :"\E&l#U" where # is the number of decipoints (1/720 inches).

To have a left margin of 0.4i on Header Page:

- set in the pboj capability the sequence: \E&l288U

- set in the pbod capability the sequence: \E&l0U

To have a left margin of 0.4i on Trailer Page:

- set in the peod capability the sequence: \E&l288U

If you don't set the sequence \E&l0U in the pbod capability, the left margin set in the pboj will be used during all the job.

- Save the file.

- Add the new Pcl in the Xprint DB : xpadd -pcl <pcl-name> -fi xpterm

- Create the device : xpadd -dev <new-printer> -pc <pcl-name>

## A.5 How can I grant users the local Xprint administrator role ?

This kind of user is called a "subroot" user by Xprint.

You can declare subroot users on a host when you create this host, or by modifying an existent host, with the" –sr" option.

For instance, if you want the user “username” to become subroot on the host “OSL”, you can type “xpmod –hos OSL –sr username”

## A.6 How can I modify the size of the header page characters?

This can be done by modifying the "beginning of job property" in the pcl.

You have to add the cpi escape sequence \E(s#H at the end of the pboj

For instance, in the PJL-PCL5e case, if you want to change the cpi to 5,

you must define a new PCl, that will be used by each concerned printer

- Edit file $XPRINT_HOME/PCL/xpterm

- Search the concerned Pcl

- Copy this Pcl under a new name

- Change:

```
pboj=%?%p1%{1}%=%t\E\%\-12345X@PJL\015\012
@PJL ECHO Xprint Printing\015\012
@PJL JOB NAME = "Xprint job"\015\012
@PJL RDYMSG DISPLAY = "%g$C%s"\015\012
@PJL USTATUSOFF\015\012
@PJL USTATUS JOB=ON\015\012
@PJL USTATUS TIMED=15\015\012
@PJL USTATUS PAGE=ON\015\012
@PJL ENTER LANGUAGE = PCL\015\012
\EE\E&l1H\E&l8C\E&k2G
%e\E\%\-12345X@PJL ENTER LANGUAGE = PCL\015\012
\EE\E&l1H\E&l8C\E&k2G%;,
```

In:

```
pboj=%?%p1%{1}%=%t\E\%\-12345X@PJL\015\012
@PJL ECHO Xprint Printing\015\012
```

```
@PJL JOB NAME = "Xprint job"\015\012

@PJL RDYMSG DISPLAY = "%g$C%s"\015\012

@PJL USTATUSOFF\015\012

@PJL USTATUS JOB=ON\015\012

@PJL USTATUS TIMED=15\015\012

@PJL USTATUS PAGE=ON\015\012

@PJL ENTER LANGUAGE = PCL\015\012

\EE\E&l1H\E&l8C\E&k2G\E(s5H

%e\E\%\-12345X@PJL ENTER LANGUAGE = PCL\015\012

\EE\E&l1H\E&l8C\E&k2G\E(s5H%;,
```

- Save the file.

- Add the new Pcl in the Xprint DB : xpadd -pcl <pcl-name> -fi xpterm

- Create the device : xpadd -dev <new-printer> -pc <pcl-name>

Pay attention that, due to the fact that characters could be lost with extreme cpi values.

## *A.7 How can I print special characters that are not recognized by the printer?*

This can be done with the Map tables.

Map tables allow the conversion of any character in a document to another character or string.

In other words, a character can be replaced by another one, or by a combination of characters (ex € can be emulated with "C", "backspace" then "=")

For instance, you need to replace the character 134 with 321, 174 with 361 (spanish characters):

1. Create a new map table (= a new ascii file) named f.i. char_map. This file will contain the following lines:

```
=0x5B

\321

=0x7B

\361

=0xFF
```

All the characters remain unchanged except 134 (= 0x5B) that is replaced by the character 321 and the character 174 (=0x7B) that is replaced by the character 361.

2. Put this new file char_map in the $XPRINT_HOME/maps directory with owner bin, group bin and access rights 0440.

3. Edit the $XPRINT_HOME/PCL/xpterm file. In this file search after the Pcl that you use.

In this Pcl, search after the capability "smbst" and add in a new line like follow:

```
%p1%"mychars@char_map ISO-100:ECMA-94%e
```

This line is for the PJL-PCL5e Pcl, where the "ISO-100:ECMA-94" is the reference language.

All characters that you will print with the language "mychars" will be the characters of the

"ISO-100:ECMA-94" language except the 134 and 174 (replaced via map table char_map).

So, depending on the used Pcl, choose your reference language.

If this line is the last of the capability, replace %e by %;

4. Register the Pcl modification in the Xprint database with the following command:

```
xpmod -pcl <pcl_name> -fi xpterm -ho-
```

5. You can now add a new job on a printer defined with the modified Pcl. In this add job, specify that you want to print with the new language:

```
xpadd -de <printer_name> -dr <document_name> -la mychars
```

## A.8 How can I print a start sheet in landscape mode ?

For instance, let's see how to print the start sheet in landscape, on a device using the HP-LASERJET pcl.

- Edit the file $XPRINT_HOME/PCL/xpterm

- Search for the concerned Pcl

- Copy this Pcl under a new name

- Replace:

boprt=\EE\E&l1H\E&k2G,

to

boprt=\EE\E&l1H**\E&l1O**\E&k2G,

If you want also to modify the end Sheet:

- Change:

eodoc=\EZ\EE\E&l1H\E&k2G,

# eoprt=,

to

eodoc=\EZ\EE\E&l1H**\E&l1O**\E&k2G,

eoprt=\EZ\EE\E&l1H\E&k2G,

- Save the file.

- Add the new Pcl in the Xprint database : xpadd -pcl <pcl-name> -fi xpterm

- Create a device using that PCL : xpadd -dev <new-printer> -pc <pcl-name>

Note that these sheets have been built on a PORTRAIT base, therefore, they will be printed onto two pages in LANDSCAPE.

## A.9 How can I send escape sequences at the beginning or at the end of a job ?

You must define a new Pcl, that will be used by each concerned printer

1) Edit the file $XPRINT_HOME/PCL/xpterm

2) Search for the concerned Pcl

3) Copy this Pcl under a new name

4) - If this Pcl is non PJL one :

- Associate the sequences of the begin of job to the "boprt" capability. If you want the sequences to be sent before each document, associate it to "bodoc" capability.
- Associate the sequences of the end of job to the "eoprt" capability. If you want the sequences to be sent after each document, associate it to "eodoc" capability.

- If this Pcl is a PJL one:

- pboj match to boprt.
- pbod match to bodoc.
- peoj match to eoprt.
- peod match to eodoc.

5) Save the file.

6) Add the new Pcl in the Xprint Database:

xpadd -pcl <pcl-name> -fi xpterm

7) Create the device :

xpadd -dev <new-printer> -pc <pcl-name>

## *A.10 How to attribute a TCP/IP address to a print server ? (ex: Axis box)*

You have to use the classic tcp "*arp*" command that matches an IP address to a MAC address.

Syntax:

"arp -s "IP_adress" "MAC_adress"

Afterwards, perform the "*ping* IP_adress" command to check the result.

## *A.11 How to change the name of a host defined within an Xprint domain ?*

Xprint provides a tool called "*xppatch*" that can adapt the configuration and the job description files in order to use a new system name.

By default, this tool only works for a local Xprint configuration (i.e. only one host defined in the database at a time), but there is a hidden option that allows you to run it in a net configuration.

This option is "- *sn*".

Please refer to the reference guide for a complete description of the "*xppatch*" command.

If used in a domain, be aware that this command has to be used carefully to avoid database conflicts.

Before using it, make sure that:

- all the hosts of the domain are stopped by the rule book
- the first restarted host must be the one on which the *xppatch* command was used

Important remark: Since the version 6.0A, Xprint supports a new feature: host name aliasing.

In most cases, this is a better solution than former *xppatch* tool.

Please refer to the reference guide for the host name aliasing.

## A.12 How to configure correctly the LANG and NLSPATH variables?

If you receive the following error:

“The message catalogue can't be opened. Please, verify your LANG and NLSPATH variables. "

or

"The message or message catalogue seems to be removed or not present. Contact your administrator if problem is still present. "

You can fix it this way:

1. Set the LANG variable to any authorized value. The command “local –a” lists all the possible values that may be used to define the LANG variable. If the problem remains, perform the Xprint commands from the directory storing the message files.

2. The following table is a summary of the possible values that may be used to define the LANG and NLSPATH variables.

| Platform | Operating System | Local? | English | German | Default | NLSPATH |
|---|---|---|---|---|---|---|
| Xprint-AX | IBM-BULL | **YES** | en_US | de_DE | en_US | XPRINT_PATH/MSG/**%L**/**%N**:XPRINT_PATH/mercator/MSG/**%L**/**%N** |
| Xprint-PA | HP-UX | **YES** | en_US.iso88591 | de_DE.iso88591 | en_US.iso88591 | XPRINT_PATH/MSG/%l/%N.cat:XPRINT_PATH/mercator/MSG/%l/%N.cat |
| Xprint-UX | UnixWare | No | En_US.ASCII or En or C | De | En_US.ASCII | XPRINT_PATH/MSG/%l/%N.cat:XPRINT_PATH/mercator/MSG/%l/%N.cat |
| Xprint-SL | Solaris Sparc | **YES** | en_US or C | De | en_US | XPRINT_PATH/MSG/%l/%N.cat:XPRINT_PATH/mercator/MSG/%l/%N.cat |
| Xprint-LX | Linux | **YES** | en_US | de_DE | en_US | XPRINT_PATH/MSG/%l/%N.cat |

3. If nevertheless, you receive always the wrong message, execute the Xprint statement from the directory where the message files are installed.
   ( f.i. : $XPRINT_HOME/MSG/En ).

## A.13 How to stop the lpdaemon on AIX?

You can stop the lpdaemon running on your AIX system by using the System Management interface Tool (smit).

Launch 'smit' and go through the following paths in the smit menus:

-> Spooler (Print Jobs)
-> Manage Remote Printer Subsystem
-> Server Services
-> lpd Remote Printer Subsystem
-> Stop Using
-> Stop BOTH Now and at System Restart

## A.14 How to suppress restrictions about vertical motion values?

In some pcl tables (hp-laserjet, pjl-pcl5e, …) the lpi value is build on the calculation of the VMI (vertical motion index) escape sequence: *\e&l#C*

# = number of 1/48 inch.

In the formula (*lpi=\e&l%{48}%p1%/%dC,*) the result of 48 divided by p1 has to be an integer.

This leads to restrictions in the values for the lpi (1,2,3,4,6,8,12,16,24,48)

A workaround is to use a conditional structure where the result of 48/p1 is already computed :

```
lpi=%?%p1%{1}%=%t\e&l48C%e
                %p1%{2}%=%t\e&l24C%e
                %p1%{3}%=%t\e&l16C%e
                %p1%{4}%=%t\e&l12C%e
                %p1%{5}%=%t\e&l9.6C%e
                %p1%{6}%=%t\e&l8C%e
                %p1%{7}%=%t\e&l6.86C%e
                %p1%{8}%=%t\e&l6C%e
                %p1%{9}%=%t\e&l5.33C%e
                %p1%{10}%=%t\e&l4.8C%e
                %p1%{11}%=%t\e&l4.36C%e
                %p1%{12}%=%t\e&l4C%e
                %p1%{13}%=%t\e&l3.69C%e
                %p1%{125}%=%t\e&l3.55C%e
                %p1%{14}%=%t\e&l3.43C%e
                %p1%{15}%=%t\e&l3.2C%e
                %p1%{16}%=%t\e&l3C%e
                %p1%{20}%=%t\e&l2.4C%e
                %p1%{24}%=%t\e&l2C%e
                %p1%{48}%=%t\e&l1C%e;
                ,
```

## *A.15 How to take the Header & Trailer pages from special hopper ?*

For instance, let's see how to take header, separator, trailer pages hopper 3 (f.i. \E&l3H selection sequence) and the default hopper is the hopper 1 (f.i. \E&l1H selection sequence), on a device using the HP-LASERJET pcl.

You must define a new Pcl, that will be used by each concerned printer

- Edit file $XPRINT_HOME/PCL/xpterm

- Search the concerned Pcl

- Copy this Pcl under a new name

- Set the hopper 3 sequence (\E&l3H) in the boprt & eodoc capability

change:

boprt=\EE\E&l1H\E&k2G, to boprt=\EE\E&l1H****E&l3H \E&k2G,

and

eodoc=\EZ\EE\E&l1H\E&k2G, to eodoc=\EZ\EE\E&l1H\E&l3H \E&k2G,

- Set the default hopper 1 (\E&l1H) sequence for the body of your jobs in the bodoc capability.

Change:

# bodoc=, to bodoc=\E&l3H,

- Save the file.

- Add the new Pcl in the Xprint DB : xpadd -pcl <pcl-name> -fi xpterm

- Create the device : xpadd -dev <new-printer> -pc <pcl-name>

With this modified PCL, all header/separator/trailer sheet will be printed with paper taken from hopper 3 and the data itself will be printed with paper taken from hopper 1.

## *A.16 Maximum number of devices per supervisor / servers objects*

Xprint has 2 different behaviours when you create devices or supervisors objects:

- If you do not specify a supervisor name when you create a device, Xprint generate a new supervisor object whenever 15 devices are associated to a supervisor.

  In the same way, If you do not specify a server name when you create a supervisor, Xprint generate a new server object whenever 3 supervisors are associated to a server.

  These default values can be changed by the environment variables

  XP_SPV_BY_DFTSRV

  Description: maximum number of supervisors by default server

  Initialisation time: before xpadd -dev

  Possible values: from 1 to 15

  Behaviour if unspecified: 3 is used

  XP_DEV_BY_DFTSPV

  Description: maxumum number of devices by default supervisor

  Initialisation time: before xpadd -dev

  Possible values: from 1 to 15

  Behaviour if unspecified: 15 is used

- If you specify the name of the supervisor (or server) object when you create a device (or a supervisor), there is no limit in the number of devices associated to a supervisor or the number of supervisors associated to a server.

## *A.17 What happens if a user launches a job containing more pages than still available in his quota?*

This job will be accepted (xprint doesn't look inside the job in this case), and will be completed.

This user will have a negative quota, and other jobs will be rejected.

## *A.18 Which Xprint concepts can be used to ensure availability of the print service ?*

Basically, availability of the print service consists in:

- Be able to access to configuration information (hosts, servers, devices…)
- Be able to access to resources (filters, loadable resources,…)
- Be able to submit new jobs

A step further concerns the recovery of the already submitted jobs on a crashed server

The three first points are supported directly by Xprint as described in the following section "Basic High Availability" .

The additional support of the job recovery is explained in the section "Enhanced High Availability"

**1. Basic High Availability:**

Xprint provides internally two features ensuring a basic high availability: the device group for the printing and the replicated database mechanism for the product management.

1. The device group for the printing

   The device group is an Xprint resource providing the possibility to associate a set of printing devices with a logical name. The usage of this name as print job destination automatically requests Xprint to use the best fitting device belonging to the list. Therefore, if the same physical printer is defined on several Xprint hosts, this printer will be accessible as long as one of these Xprint hosts is running.

   The following picture presents this feature: The printer is LAN connected and is defined on both Xprint hosts "Host-B" and "Host-C". The device group name is "Printer1" and gathers the two devices "Printer1B" (printer definition on Host-B) and "Printer1C" (printer definition on Host-C). By this way, a user or an application residing on Host-A and using the destination name "Printer1" can access the physical printer as long as "Host-B" or "Host-C" is running.

2. Database replication

The replicated database mechanism for the product management is based on the active master/potential master roles of the hosts in the Xprint domain.

When the active master is down, a potential master takes automatically its place.

Ex: If active master is down, the first Potential Master in the hierarchy will automatically take its place.

**1. Enhanced High Availability:**

A print job can be considered as made of 2 components:

- the real data to be printed
- the description of how to print the document

These parts can be found at different locations:

- To avoid needless file transfer, the documents to be printed stay on the Client system until printing. So, the document is at most transferred once to the printing system.
- The job description resides in the "control file" stored in the server directory (i.e. $XPRINT_HOME/*SV/…*) on the Server system

A preliminary remark is that the job recovery is only possible if the Xprint directories of the failing host are still accessible during the crash (for example via a RAID system).

Two major approaches are usually followed to provide high availability:

A) The failing host is replaced completely by a new starting backup system

In the following picture, primary node "HOST A" gathers all critical applications (including the print server)

Backup node "HOST B" is used for non-critical operations

When the primary node stops, the backup node has to automatically:

- shutdown the non critical services
- switch some disks in order to access primary node file systems and recover the critical applications

If the backup node did not acquire the same system name as the primary node, some changes on the Xprint side could have to be done:

- In Xprint V6, man can take profit of the *$XPCONF/DB.local/localconfig* file to assign a virtual host name to the system.

  If this files exists and contains a line of the type `LOCALHOST=hostname`, the mentioned hostname is used as the node name of the local host.

  In other words, if at installation time a virtual host name was given to the system, nothing has to be done: Xprint will continue to use this name after the crash.

- For previous versions, the "*xppatch*" command can adapt the configuration and the job description files to use the new system name.

B) The jobs of the failing system are taken over by another already running system

HA environments have evolved towards the cluster concept: a set of systems running at the same time and dynamically recovering the application previously running on the crashed system.

The principle is no longer to obtain an identical image of the failing system. The mechanism is more a migration of the applications from one node to another one.

Xprint provides a tool called "*xprecover*". This official command is in fact responsible for the resubmission of jobs from the crashed system to a still running one. The mechanism is based on the access of the Xprint directories of the dead system (f.i. via a switchable disk) and to search for the job description files (also called control files). When a control file is discovered, some mapping rules are applied in order to deduce the new "backup" device to which a new corresponding job will be submitted with the same options as the original one.

# B. List of supported printers

Please have a look at the section 7.1 of the reference manual or at the section “J.1 Which PCL do we recommend according to a printer ?” of this F.A.Q.

# C. Installation UNIX

Please read the Xprint 8 release nopte from section 8.4.4 to 8.4.10.

# D. Installation Windows

Please have a look at the section 7.3 of the Xprint 8 release note

# E. Starting and stopping

## *E.1 How can I reduce the delay between a stop-start of Xprint ?*

On a Xprint-Net configuration the port *Xprint_db* stays for a while in *TIME-WAIT* after the processes are already gone. During this period Xprint can not be re-started, the message that is returned is: "*XP000161: Database public port open failed*"

Following the platform, this period takes about some seconds, to several minutes on the Solaris operating system.

It is possible to reduce the period of *TIME-WAIT* by means of variable of the kernel.

In the case of the solaris operating system, you can read the actual value with:

*ndd /dev/tcp tcp_time_wait_interval*

(value is in ms)

If you want to set the value to 1 minute, use:

*ndd -set /dev/tcp tcp_time_wait_interval 60000*

## *E.2 How must the Xprint Pot-Masters be rebooted ?*

It is strongly advised against restarting all the Pot-Masters at the same time, in order to avoid saturation

about the Xprint DB management.

The mastership handling cannot be processed so quickly between each potential master .

So the servers must likely be booted with a delay corresponding on a startup completion time.

(Same advise can be given when you xpstart on different hosts of a domain)

## *E.3 Why do I get the error message XP000158 : Database installation error?*

This is because there is no entry for the spooler in the services file. (/etc/services on Linux/Unix), usually %WINDIR%/system32/drivers/etc/services on Windows. You must add the entry Xprint_db and chose a port number of your choice.

# F. Product Licensing

## F.1 How to use xpkey -i with codes displayed on 2 lines, in the license file ?

For instance, to register the following key:

```
Mq GB Fu 5Z tD gI rD CW 1D wr CX fI Sq Bb:

LJ f4 W6 LL MM::

==========

# File : </C=/Program Files/Xprint/data//DPMX.1>

# Product : <Xprint> - version <05.2A00>

# Expiration date : <2025/12>

# Devices : <256>

# Detailed list : Net Server GW_BSD GW_GIP2 FF_BSD FF_AXIS Mercator

# Supported O.S. : AIX NT

# Maximum hosts per site <65535>
```

You have to use the command:

```
Xpkey -i "Mq GB Fu 5Z tD gI rD CW 1D wr CX fI Sq Bb:LJ f4 W6 LL MM:"
```

## F.2 What are the Demo license conditions?

**Evaluation period**

The evaluation period during which Xprint can run without license after installationis limited to 30 days. During this period, a maximum of 32 devices may be configured simultaneously.

**Evaluation mode**

– Evaluation mode is granted only once per version
– The expiration date is 30 days since the first *xpstart* or 30 days after the first *xpadd –dev*, whichever is later.
– Both *xpstart* and *xpstop* messages include the string *Demo License*.
– E-mail is sent to root at each *xpstart* reporting the number of days remaining.
– A logging entry is generated reporting the number of days remaining.
– The string *Demo License* is printed on the start and end sheets.
– Most of the functionality of Xprint is available.
– The number of devices is restricted to 32. This restriction does only make sense if the Xprint domain does not have any other keys allowing more devices.

# G. License generation tool (DMG)

## G.1 What kind of keys can be generated with the DMG license generation tool?

The license key generator has been designed to generate keys for two purposes:

- Keys that control the number of sessions within the domain monitoring GUI
- Keys that control whether the event collector saving information is turned on or not

## G.2 How can I produce such keys?

From a terminal or a MS-DOS prompt, execute one of the following command:

- guiGenkey –i to run the program in interactive mode

- guiGenkey <vendorname> <license id> <numeric value>
  where <vendorname> represents your company, <license id> represents the feature you want to generate a key for, <numeric value> depends on the feature.

Currently, there are two supported features

| Feature | license id | numeric value |
|---|---|---|
| Number of sessions allowed for the domain monitoring GUI | Gui_Sessions | 1 .. 32768 |
| Save all information produced by the event collector under XML format | Event_Collector | 1 |

When generating a key for the domain monitoring gui (Gui_Sessions), the numeric value representing the number of sessions allowed may vary according to the needs of the customer.

When generating a key for the event collector (Event_Collector feature), the numeric value may only be 1. This just turns on the event collection process.

Example of key generation for the Domain Monitoring GUI

*guiGenkey –i*

Program output:

Interactive Mode
Vendor Name: OSL
License ID : Gui_Sessions
Number:1

Example of key generation for the Event Collector

*guiGenkey –i*

Program output:

Interactive Mode
Vendor Name: OSL
License ID : Event_Collector
Number:1

The program creates the key within a file (guiKey file). This file is created in the current directory. Afterwards, this file has to be sent to the customer and must be copied in the right directory. **Be careful, the name of this file is very important** !

## G.3 Where is the DMG key file located?

In the root of the domain monitoring gui:

- Unix : /var/spool/Xprint/DomMonGui/Server/
  File name : **guiKey**
  Access right: **500**
  User: **nobody (www on HP)**
  Group: **nobody (www on HP)**

- Windows : C:\Program Files\DomMonGui\Server\
  File name : **guiMsg**

## G.4 Where is the event collector key file located?

In the DMG Relay installation path :

- Unix : /var/spool/Xprint/DomMonGui/Relay/OSL_LICENCE/
  File name : **Event_Licence**
  Access right: **500**
  User: **nobody**
  Group: **nobody**

- Windows : C:\Program Files\DomMonGui\Relay\OSL_LICENCE\
  File name : **Event_Licence**

# H. Printer connection

## *H.1 How to define a printer connected to an Axis box ?*

Printing to a printer connected to an Axis box is possible by using the axis fast filter. This filter allows not only to submit print jobs but also to have a follow-up of the printer status (as for example Printer Off, Paper End , ....).

**Prerequisites :**

- Axis box connected to the network via TCP/IP
- UNIX System V Release 4

**Axis configuration :**

To establish communication with the TCP network, the Internet address and the host name must be included in your system host table and downloaded in the Axis box.

**- create communication end point in the local /etc/hosts file**

Example:
< internet address > < host name >
112.418.198.200 axis

**- send the address to the Axis box using *arp* command**

arp -s <host name> <ethernet address >
where ethernet address is the *serial number* of your Axis box .

Example:
arp -s axis 00:32:8c:18:00:12
ping axis (check that axis is *alive* )

**Xprint configuration :**

- add the axis fast filter into the Xprint configuration

Example:
xpadd -flt axis -tp FAST -cm prosbsd -op "PRINTER *=*" "COMMENT *=*"

- create a Xprint device connected to the Axis box

Example :
xpadd -dev <device name> -da "axis 35" -fl axis -ca "PR1" -co LAN -pc < PCL name>

where the device address (-da) is set as follow
axis ⇨ *host name*
35 ⇨ *port number fixed to 35*

and the administrator comment (-ca ) is set to the physical printer ports.
The factory default configuration is :
PR1 ⇨ LPT1 (parallel)
PR2 ⇨ LPT2 (parallel)
PR3 ⇨ COM1 (serial)
PR4 ⇨ COM2 (serial)

One to four printers can be connected to the Axis box depending on the box model.

**Restrictions :**

When a printer exception occurs while printing a job, the printer will be seen as being in error during the whole job printing.

This is due to a wrong behaviour of the Axis box which sends an error message when a problem occurs on the printer

( for example: Paper End, Printer Off, .. ), but does not notify when the problem is repaired. No printer status information

is returned by AXIS box Firmware version 5.02. Firmware version 4.22 and 4.23 seems to return complete information.

## *H.2 How to configure the ports of an Axis box ?*

1. Firstly, you have to connect to the Axis box by means of ftp:

   ftp axis
   User : root
   Password : pass

2. Get the file config from the Axis box:

   get config
   bye

3. Edit the file config in order to modify the port number:

   vi config
   line 18 : RTN_OPT = YES

   line 601 : RTEL_PR1 = < port_number 1>
   line 601 : RTEL_PR2 = < port_number 2>
   line 601 : RTEL_PR3 = < port_number 3>

   Note: Be careful, the line numbers may change !

4. Replace the old file config by the one that you have modified.

   ftp axis
   put config CONFIG
   bye

5. Finally you must reboot the Axis box to take the modification into account.

   Note: The CONFIG (upper-cases !) is hidden, it will be taken into account at boot time.

# I. Printing

## I.1 Display on PJL printers is not reset

On a device configured in Xprint with the pcl object *PJL-PCL5e*, the display of the printer is not reset to "*ready*" after printout, but displays the job name, until next job arrives.

This is the default behavior.

But you can choose another option in the pcl object.

This second possibility is to display the job name when the job arrives on the printer, and then reset it once Xprint has sent the last job page.

Of course, regarding on the document length and the size of the printer buffer, it could happens that the message disappears after a very short period of time…

If you want to make this change, edit the "PJL based" tables in the *xpterm* file in the following way:

Replace

```
@PJL RDYMSG DISPLAY = "%g$G%s"\015\012
```

by

```
@PJL RDYMSG = ""\015\012
```

## I.2 How to print 77 lines in 10LPI and Landscape on an HP-LASERJET printer ?

You must define a new Xprint pcl, called for example "LVM10", in a xpterm file (the default Xprint one or a user one).

Let us suppose that the pcl is defined in a user xpterm file called "xpterm.lvm10", you add it in Xprint by issuing

the command :

```
xpadd -pcl LVM10 -fi <pathname>/xpterm.lvm10
```

Define a device using this pcl by :

```
xpadd -dev <device name> -pc LVM10 . . .
```

You will be able therefore to submit your print jobs by issuing the following command :

```
xpadd -dr <file name> -de <device name> -pl 77 -vm 10 -ls LANDSCAPE
```

Here below follows the file xpterm.lvm10 defining the pcl LVM10.

xpterm.lvm10

```
#/* @(#) xpterm.src 1.21 94/04/07 16:41:45 @(#) */
# !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# ###############
# # LVM10 #
```

```
# ###############
#
LVM10,
# Printing Rate and Buffer Size
# If you whish that Xprint synchronizes itself with the printer,
# please use the "cps" capability given here below as a comment.
# Adjust its value if necessary. It is given here as a comment
# in order to avoid useless waiting times that could occur.
# cps#1200,
bufsz#2048,
# beginning of sequences
# bodoc=,
# bolin=,
# bopag=,
boprt=\EE\E&k2G,
# boprt=\E&l4.8C,
# end of sequences
eodoc=\EZ\EE\E&k2G,
# eolin=,
# eopag=,
# eoprt=\f,
# cancel
# cancel=,
# protocol
etx,
# cursor motion
bs=\b,
ht=\t,
cr=\r,
ff=\f,
lf=\n,
# special processings
# fastf=,
# prepr=,
# postpr=,
# itfpr=,
# itfpo=,
# maptb=,
# job options <<<< start
# hardcopy
hrdcp=\E&l%p1%dX,
# hopper
# value 0 can not be given by user --> replaced by value 9.
hopr=%?%p1%{1}%=%t\e&l1H%e
%p1%{2}%=%t\e&l2H%e
%p1%{3}%=%t\e&l3H%e
%p1%{4}%=%t\e&l4H%e
%p1%{5}%=%t\e&l5H%e
%p1%{6}%=%t\e&l6H%e
%p1%{9}%=%t\e&l0H%;
,
# output bin
obin=%?%p1%{1}%=%t\e&l1G%e
%p1%{2}%=%t\e&l2G%e
%p1%{3}%=%t\e&l3G%;
,
# Print Quality (Draft, Normal, Near Letter)
# sdrfq=,
# snrmq=,
# snlq=,
# layup (Portrait, Landscape)
sprt=\E&l0O\e&l4.8C,
slnd=\E&l1O\e&l4.8C,
```

```
# sides
# SINGLE : 1
# DOUBLE_WIDE 2
# DOUBLE_NARROW 3
sides=%?%p1%{1}%=%t\e&l0S%e
%p1%{2}%=%t\e&l1S%e
%p1%{3}%=%t\e&l2S%;,
# character set
# PM A0259586 - SPOOL V4.1B00 - add symbol set PC-850
smbst=%?%p1%"HP-Math-7"%=%t\e(0A%e
%p1%"HP-Line-Draw"%=%t\e(0B%e
%p1%"ISO-60:Norwegian-version-1"%=%t\e(0D%e
%p1%"ISO-61:Norwegian-version-2"%=%t\e(1D%e
%p1%"HP-Roman-Extension"%=%t\e(0E%e
%p1%"ISO-4:United-Kingdom"%=%t\e(1E%e
%p1%"ISO-25:French"%=%t\e(0F%e
%p1%"ISO-69:French"%=%t\e(1F%e
%p1%"HP-German"%=%t\e(0G%e
%p1%"ISO-21:German"%=%t\e(1G%e
%p1%"HP-Greek-8"%=%t\e(8G%e
%p1%"ISO-15:Italian"%=%t\e(0I%e
%p1%"ISO-14:JIS-ASCII"%=%t\e(0K%e
%p1%"ISO-57:Chinese"%=%t\e(2K%e
%p1%"Technical-7"%=%t\e(1M%e
%p1%"HP-Math-8"%=%t\e(8M%e
%p1%"ISO-100:ECMA-94"%=%t\e(0N%e
%p1%"OCR-A"%=%t\e(0O%e
%p1%"OCR-B"%=%t\e(1O%e
%p1%"ISO-11:Swedish"%=%t\e(0S%e
%p1%"HP-Spanish"%=%t\e(1S%e
%p1%"ISO-17:Spanish"%=%t\e(2S%e
%p1%"ISO-10:Swedish"%=%t\e(3S%e
%p1%"ISO-16:Portuguese"%=%t\e(4S%e
%p1%"ISO-84:Portuguese"%=%t\e(5S%e
%p1%"ISO-85:Spanish"%=%t\e(6S%e
%p1%"ISO-6:ASCII"%=%t\e(0U%e
%p1%"HP-Legal"%=%t\e(1U%e
%p1%"ISO-2:International-Reference-Version"%=%t\e(2U%e
%p1%"OEM-1"%=%t\e(7U%e
%p1%"HP-Roman-8"%=%t\e(8U%e
%p1%"PC-8"%=%t\e(10U%e
%p1%"PC-8(D/N)"%=%t\e(11U%e
%p1%"PC-850"%=%t\e(12U%e
%p1%"HP-Pi-Font"%=%t\e(15U%e
%p1%"ISO-8859-1"%=%t@map_tab.HPLJT ISO-100:ECMA-94%e
%p1%"ISO-88592"%=%t\e(2Q%e
%p1%"ISO-88595"%=%t\e(5Q%e
%p1%"CP852"%=%t\e(12Q%e
%p1%"CP866"%=%t\e(15Q%e
%p1%"INT"%=%t\e(2U%e
%p1%"ASCI"%=%t\e(0U%e
%p1%"DTSH"%=%t\e(1G%e
%p1%"BELG"%=%t\e(0F%e
%p1%"FRNZ"%=%t\e(0F%e
%p1%"DAEN"%=%t\e(0D%e
%p1%"SWED"%=%t\e(0S%e
%p1%"FINN"%=%t\e(0S%e
%p1%"ITAL"%=%t\e(0I%e
%p1%"SPAN"%=%t\e(1S%e
%p1%"ENGL"%=%t\e(1E%e
%p1%"NORW"%=%t\e(0D%e
%p1%"CH"%=%t\e(0U%e
%p1%"NIED"%=%t\e(0U%e
```

```
%p1%"8859-1"%=%t@map_tab.HPLJT ISO-100:ECMA-94%;

# lines per inch
# lpi=\e&l%{48}%p1%/%dC,
lpi=%p1,
# characters per inch
cpi=\e(s%p1%PA%gA%dH,
# style (Italics, Normal)
sitm=\E(s1S,
ritm=\E(s0S,
# typeface
# A0273944 : extended typefaces HP LaserJet 4
# Two iternal typefaces are proportional typefaces, these are "Univers"
# and "CG-Times" typefaces. Because of this, the horizontal motion must
# be in point given, so, there is a conversion for horizontal motion.
# The conversion follow the following law : 1 point = 1/72 inch.
typfc=%?%p1%"Line-Printer"%=%t\e(s0%e
%p1%"Pica"%=%t%\e(s1%e
%p1%"Elite"%=%t%\e(s2%e
%p1%"Courier"%=%t%\e(s3%e
%p1%"Helv"%=%t%\e(s4%e
%p1%"Helv-Prop"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s4%e
%p1%"TmsRmn"%=%t%\e(s5%e
%p1%"TmsRmn-Prop"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s5%e
%p1%"Letter-Gothic"%=%t%\e(s6%e
%p1%"Letter-Gothic-Prop"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s6%e
%p1%"Script"%=%t%\e(s7%e
%p1%"Prestige"%=%t%\e(s8%e
%p1%"Caslon"%=%t%\e(s9%e
%p1%"Orator"%=%t%\e(s10%e
%p1%"Presentations"%=%t%\e(s11%e
%p1%"Helv-Condensed"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s12%e
%p1%"Serifa"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s13%e
%p1%"Futura"%=%t%\e(s14%e
%p1%"Palatino"%=%t%\e(s15%e
%p1%"ITC-Souvenir"%=%t%\e(s16%e
%p1%"Optima"%=%t%\e(s17%e
%p1%"ITC-Garamont"%=%t%\e(s18%e
%p1%"Cooper-Black"%=%t%\e(s19%e
%p1%"Ribbon-(Coronet)"%=%t%\e(s20%e
%p1%"Broadway"%=%t%\e(s21%e
%p1%"Bauer-Bodoni-Black-Condensed"%=%t%\e(s22%e
%p1%"Century-Schoolbook"%=%t%\e(s23%e
%p1%"Century-Schoolbook-Prop"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s23%e
%p1%"University-Roman"%=%t%\e(s24%e
%p1%"Helv-Outline"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s25%e
%p1%"Futura-Condensed"%=%t%\e(s26%e
%p1%"ITC-Korinna"%=%t%\e(s27%e
%p1%"Naskh"%=%t%\e(s28%e
%p1%"Cloister-Black"%=%t%\e(s29%e
%p1%"ITC-Galliard"%=%t%\e(s30%e
%p1%"ITC-Avant-Garde-Gothic"%=%t%\e(s31%e
%p1%"Brush"%=%t%\e(s32%e
%p1%"Blippo"%=%t%\e(s33%e
%p1%"Hobo"%=%t%\e(s34%e
%p1%"Windsor"%=%t%\e(s35%e
%p1%"Helv-Compressed"%=%t%\e(s36%e
%p1%"Helv-Extra-Compressed"%=%t%\e(s37%e
%p1%"Peignot"%=%t%\e(s38%e
%p1%"Baskerville"%=%t%\e(s39%e
%p1%"ITC-Garamont-Condensed"%=%t%\e(s40%e
%p1%"Trade-Gothic"%=%t%\e(s41%e
%p1%"Goudy-Old-Style"%=%t%\e(s42%e
```

```
%p1%"ITC-Zapf-Chancery"%=%t%\e(s43%e
%p1%"Clarendon"%=%t%\e(s44%e
%p1%"ITC-Zapf-Dingbats"%=%t%\e(s45%e
%p1%"Cooper"%=%t%\e(s46%e
%p1%"ITC-Bookman"%=%t%\e(s47%e
%p1%"Stick"%=%t%\e(s48%e
%p1%"HP-GL-Drafting"%=%t%\e(s49%e
%p1%"HP-GL-Spine"%=%t%\e(s50%e
%p1%"Gill-Sans"%=%t%\e(s51%e
%p1%"Univers1"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s52%e
%p1%"Univers2"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s4148%e
%p1%"CG-Times"%=%t\e(s%{72}%gA%/%dV\e(s1P\e(s4101%e
%p1%"Bodoni"%=%t%\e(s53%e
%p1%"Rockwell"%=%t%\e(s54%e
%p1%"Melior"%=%t%\e(s55%e
%p1%"ITC-Tiffany"%=%t%\e(s56%e
%p1%"ITC-Clearface"%=%t%\e(s57%e
%p1%"Amelia"%=%t%\e(s58%e
%p1%"Park-Avenue"%=%t%\e(s59%e
%p1%"Handel-Gothic"%=%t%\e(s60%e
%p1%"Dom-Casual"%=%t%\e(s61%e
%p1%"ITC-Benguiat"%=%t%\e(s62%e
%p1%"ITC-Cheltenham"%=%t%\e(s63%e
%p1%"Century-Expanded"%=%t%\e(s64%e
%p1%"Franklin-Gothic"%=%t%\e(s65%e
%p1%"Franklin-Gothic-Expressed"%=%t%\e(s66%e
%p1%"Franklin-Gothic-Extra-Condensed"%=%t%\e(s67%e
%p1%"Plantin"%=%t%\e(s68%e
%p1%"Trump-Mediaeval"%=%t%\e(s69%e
%p1%"Albertus"%=%t%\e(s4362%e
%p1%"Antique Olive"%=%t%\e(s4168%e
%p1%"Clarendon"%=%t%\e(s4140%e
%p1%"Coronet"%=%t%\e(s4116%e
%p1%"Courier"%=%t%\e(s4099%e
%p1%"Garamond"%=%t%\e(s4197%e
%p1%"Antiqua"%=%t%\e(s4197%e
%p1%"Letter Gothic"%=%t%\e(s4102%e
%p1%"Marigold"%=%t%\e(s4297%e
%p1%"CG Omega"%=%t%\e(s4113%e
%p1%"Arial"%=%t%\e(s16602%e
%p1%"Times New"%=%t%\e(s16901%e
%p1%"Symbol"%=%t%\e(s16686%e
%p1%"Wingdings"%=%t%\e(s31402%e
%p1%"Futura-Black"%=%t\e(s70%;T
,
# option hierarchy
opthr=orientation lpi forml,
# job options <<<< end
# setting tabs
# tabs=,
# values after reset
rcpi#10,
rlpi#6,
# form length
# planned for future releases
# sfrml=%?%p2%{64}%>%t\E&l1E\e&l%p2%dF%e\e&l%p1%dF%;,
# sfrml=\e&l%p1%dF,
sfrml=\E&l1O\e&l4.8C\e&l0L\E&l-180U\e&l76L,
sfrmu#'L',
# printable area
npll=0.37i,
nppl=1i,
# flinl=,
```

```
# left and top margins
topm=%?%p1%{0}%>%t\e&l%p1%dE%;,
topu#'L',
# topm=%?%p1%{0}%>%t\e&l%p1%{720}%*%{100}%/%dZ%;,
# topu#'i',
# leftm=%?%p1%{0}%>%t\e&a%p1%dL%;,
# leftu#'C',
leftm=%?%p1%{0}%>%t\e&l%p1%{720}%*%{100}%/%dU%;,
leftu#'i',
# native sequences
# mix,
ctlsq=
\e&l%dC%,SLPI%,Y%,%?%p1%{0}%=%t6%e%{48}%p1%/%d%;%,
\e&l%dD%,SLPI%,Y%,%p1%d%,
\e=%,PLD%,N%,%,
\e&l0O%,PORT%,Y%,%,
\e&l1O%,LAND%,=%,%,
\e&l2O%,%,=%,%,
\e&l3O%,%,=%,%,
\e&l0S%,%,Y%,%,
\e&l1S%,%,=%,%,
\e&l2S%,%,=%,%,
\e&a%dG%,%,N%,%,
\e(3@%,%,Y%,%,
\e)3@%,%,Y%,%,
\e(%dX%,%,Y%,%,
\e)%dX%,%,Y%,%,
\e(%d%c%,%,Y%,%,
\e)%d%c%,%,Y%,%,
\e(s%dV%,%,Y%,%,
\e)s%dV%,%,Y%,%,
\e(s%dH%,SCPI%,Y%,%p1%d%,
\e&k0S%,SCPI%,=%,%{10}%d%,
\e&k2S%,SCPI%,=%,%{16}%d%,
\e&k4S%,SCPI%,=%,%{12}%d%,
\e)s%dH%,%,Y%,%,
\e(s%dP%,%,Y%,%,
\e)s%dP%,%,Y%,%,
\e(s%dS%,%,Y%,%,
\e)s%dS%,%,Y%,%,
\e(s%dB%,%,Y%,%,
\e)s%dB%,%,Y%,%,
\e(s%dT%,%,Y%,%,
\e)s%dT%,%,Y%,%,
\e&d0D%,%,Y%,%,
\e&d3D%,%,=%,%,
\e&d@%,%,=%,%,
\e&d3@%,%,=%,%,
\e)s%dW%,SKP%,Y%,%p1%d%,
\e(s%dW%,SKP%,Y%,%p1%d%,
\e&a%dC%,AHPC%,N%,%,
\e&a%dH%,%,N%,%,
\e*p%dX%,%,N%,%,
\e&a+%dC%,%,N%,%,
\e&a-%dC%,%,N%,%,
\e&a+%dH%,%,N%,%,
\e&a-%dH%,%,N%,%,
\e*p+%dX%,%,N%,%,
\e*p-%dX%,%,N%,%,
\e&a%dR%,AVPR%,N%,%,
\e&a%dV%,%,N%,%,
\e*p%dY%,%,N%,%,
\e&a+%dR%,%,N%,%,
```

```
\e&a-%dR%,%,N%,%,
\e&a+%dV%,%,N%,%,
\e&a-%dV%,%,N%,%,
\e*p+%dY%,%,N%,%,
\e*p-%dY%,%,N%,%,
\e&f0S%,%,N%,%,
\e&f1S%,%,N%,%,
\e&k%dH%,SCPI%,Y%,%?%p1%{0}%=%t10%e%{120}%p1%/%d%;%,
\e&l%dX%,%,Y%,%,
\e&l%dH%,%,Y%,%,
\e&l%dG%,%,Y%,%,
\e&l%dA%,%,Y%,%,
\e&l%dP%,SLPL%,Y%,%,
\e&l%dE%,%,Y%,%,
\e&l%dZ%,%,=%,%,
\e&l%dF%,SLPL%,Y%,%,
\e&l0L%,%,Y%,%,
\e&l1L%,%,=%,%,
\e&a%dL%,%,Y%,%,
\e&l%dU%,%,=%,%,
\e&a%dM%,%,Y%,%,
\e9%,%,Y%,%,
\e&k%dG%,%,Y%,%,
\e&s0C%,%,Y%,%,
\e&s1C%,%,=%,%,

\e&p%dX%,SKP%,N%,%p1%d%,
\e%%0B%,NOFRM%,Y%,%,
\e%%1B%,NOFRM%,=%,%,
\e%%0A%,NOFRM%,Y%,%,
\e%%1A%,NOFRM%,=%,%,
\e*c%dD%,%,Y%,%,
\e*c%dF%,%,Y%,%,
\e*c%dE%,%,Y%,%,
\e&a%dP%,NOFRM%,N%,%,
\e*t%dR%,%,Y%,%,
\e*r0A%,%,N%,%,
\e*r1A%,%,N%,%,
\e*b%dW%,SKP%,N%,%p1%d%,
\e*b%dY%,NOFRM%,N%,%,
\e*b%dM%,%,N%,%,
<FONT F
```

## How to use ComFax ?

You must :

1. Add the comFax input in xpterm official or move xpterm in a personnal directory :

   ***xpadd -pcl comFAX -fi xpterm*** (official)

   or

   ***xpadd -pcl comFAX -f <mydir>/xpterm***
2. Create a printer fax :

   ***xpadd -dev <fax printer name> -da <modem address> -pc comFAX -co PARALLEL***

Put the XpcomFAX.sh script in the backends directory ( $XPRINT_HOME/backends ) with next access rights ( 0550 bin bin ).

3. Send a job. The phone number is specified in the job comment flag –jc.

   ***xpadd -de <fax printer name > -dr ….. -jc 003281554320***

The file ***/tmp/comFAX.log*** is updated when a job fax is send.

Care : The job fax disappear of the Xprint BD after the submission to comFax.
No follow up by Xprint command will be possible !!

Note : The comFAX command comfaxpr emulate a ASCII printer (lp spooler) and sent the data to the Fax after calling a given phone number.

**Xpterm :**

```
#/* @(#) xpterm.src 1.21 94/04/07 16:41:45 @(#) */
# !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
# do not remove this line - keep aligned with source file
#
# !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
# ############
# # comFAX #
# ############
#
comFAX,
itfpr=xpcomFAX.sh,
itfpo="DEBUG *=*"
"JOB_ID *=*"
"COMMENT *=*"
"FIL_REF *=*",
```

**XpcomFAX.sh :**

```
#!/sbin/ksh
#
# backend use to send fax
# input :
# $1 = debug
# $2 = job id
# $3 = comment
# $4 = file to be fax
#
# Author : A.Flagothier EPSC-1 Namur
# Phone : 081/554320
#

DBGFILE=/tmp/comFAX.log
FAXPATH=/comfax/bin
```

```
debug=$1
jobid=$2
comment=$3
files=$4

echo " `date` fax : jobid $jobid, comment $comment , files $files " >> $DBGFILE

if [ -z "$comment" ]
then
echo " job ${jobid} : NO phone number see comment " >> $DBGFILE
echo " job will be SUSPEND" >> $DBGFILE
exit 3
fi

cat $files | ${FAXPATH}/comfaxpr -phone $comment

echo " `date` fax $jobid send exit = $? " >> $DBGFILE

exit 0
```

## *I.3 How to define the new forms for the format LETTER ?*

You must :

1. Create a new form :

   **xpadd -frm LETTER -ph 11i -pw 8.5i**

2. Modify the default form of each host (the host can be ACTIVE or not) :

   **xpmod -hos -fm LETTER**

   By this way, each new printer is created with the form LETTER.

3. Modify the default form of existing printers :

   **xpchange -dev -stN** (deactivate all printers).
   **xpmod -dev -fm LETTER** (modify all printers in order to assign LETTER as the default form).
   **xpchange -dev** (activate the printers again).

If you would like to define new forms based on the letter page size, you can use xpcopy -frm LETTER

(instead of xpadd -frm ... -ph 11i -pw 8.5i ...).

For example, if you would like to create a form called NEWFORM with a letter size but with

a specific default font 'Font1', you can use :

**xpcopy -frm LETTER NEWFORM -ft Font1**

## *I.4 Jobs sent to printer with bsd fast filter remain ACTIVE forever.*

This results from a deadlock between fast filter and backend processing. The solution consists of modifying

the definition of each PCL used with a bsd fast filter (the path of PCL file is opt/Xprint/PCL/xpterm).

The option to be adapted is "itfpo" and the new value is the following one:

itfpo= "JOB_ID *=*" "DEBUG *=*" "PCL *=*" "COMMENT *=-w"

Then you have to perform 'xpmod -pcl <PCL name> -fi xpterm' for each PCL used by a bsd fast filter device.

# J. Print job processing

## *J.1 Which PCL do we recommend according to a printer ?*

| [Brother] | |
|---|---|
| Brother HL-10DV | PJL-PLC5e |
| Brother HL-10h | PJL-PCL5e |
| Brother HL-10V | PJL-PLC5e |
| Brother HL-1260 | PJL-PCL5e |
| Brother HL-4 | HP-LASERJET |
| Brother HL-4V | PJL-PLC5e |
| Brother HL-4Ve | PJL-PLC5e |
| Brother HL-630 | HP-LASERJET |
| Brother HL-660 | PJL-PCL5e |
| Brother HL-6V | PJL-PLC5e |
| Brother HL-8 | HP-LASERJET |
| Brother HL-8D | HP-LASERJET |
| Brother HL-8e | HP-LASERJET |
| Brother HL-8V | PJL-PLC5e |
| | |
| [Bull] | |
| Bull Compuprint PageMaster 1025 | PJL-PLC5e |
| Bull Compuprint PageMaster 413 | PJL-PLC5e |
| Bull Compuprint PageMaster 815 | PJL-PLC5e |
| Bull Compuprint PageMaster 825 | PJL-PLC5e |
| Bull Compuprint PM 100 | DJ-4812 |
| Bull Compuprint PM 200 | DJ-4812 |
| Bull Compuprint PM 201 | DJ-4812 |
| Bull Compuprint PM 300 (B/W) | DJ-4812 |
| Bull Compuprint PM 300 (Color) | DJ-4812 |

| | |
|---|---|
| | |
| [Canon] | |
| Canon LBP-4 | CAPSL-LPB8 |
| Canon LBP-4 Lite | CAPSL-LPB8 |
| Canon LBP-4 Plus | CAPSL-LPB8 |
| Canon LBP-4i | PJL-PLC5e |
| Canon LBP-4sx | PJL-PLC5e |
| Canon LBP-4U | CAPSL-LPB8 |
| Canon LBP-8 II | CAPSL-LPB8 |
| Canon LBP-8 IIR | CAPSL-LPB8 |
| Canon LBP-8 IIT | CAPSL-LPB8 |
| Canon LBP-8 III | CAPSL-LPB8 |
| Canon LBP-8 III Plus | CAPSL-LPB8 |
| Canon LBP-8 IIIR | CAPSL-LPB8 |
| Canon LBP-8 IIIT | CAPSL-LPB8 |
| Canon LBP-8 IV | CAPSL-LPB8 |
| Canon LBP-8sx | PJL-PLC5e |
| Canon LBP-430 | PJL-PLC5e |
| Canon LBP-860 | PJL-PCL5e |
| Canon LBP-1260 | PJL-PCL5e |
| Canon LBP-1260 Plus | PJL-PCL5e |
| Canon LBP-1260C | CAPSL-LPB8 |
| | |
| [Citizen] | |
| Citizen PROjet | DJ-4812 |
| Citizen PROjet II | DJ-4812 |
| Citizen ProLaser 6000 | PJL-PLC5e |
| | |
| [Compaq] | |

| | |
|---|---|
| Compaq PageMarq 15 | PJL-PLC5e |
| Compaq PageMarq 20 | PJL-PLC5e |
| | |
| [Digital] | |
| Digital DECcolorwriter 120ic | DJ-4812 |
| Digital DECcolorwriter 520ic | DJ-4812 |
| Digital DEClaser 1100 (LJ) | HP-LASERJET |
| Digital DEClaser 1800 (PCL) | PJL-PLC5e |
| Digital DEClaser 2100plus (LJ) | HP-LASERJET |
| Digital DEClaser 2200plus (LJ) | HP-LASERJET |
| Digital DEClaser 3200 (LJ) | HP-LASERJET |
| Digital DEClaser 3500 (PCL) | PJL-PLC5e |
| Digital DEClaser 5100 (PCL) | PJL-PCL5e |
| Digital DECmultiJET 1000 | DJ-4812 |
| Digital DECmultiJET 1500 | DJ-4812 |
| Digital DECmultiJET 2000 | DJ-4812 |
| Digital DECwriter 100i | DJ-4812 |
| Digital DECwriter 110i | DJ-4812 |
| Digital DECwriter 500i | DJ-4812 |
| | |
| [Epson] | |
| Epson ActionLaser 1000 | HP-LASERJET |
| Epson ActionLaser 1500 | PJL-PLC5e |
| Epson ActionLaser 1600 | PJL-PCL5e |
| Epson ActionLaser II | HP-LASERJET |
| Epson Compatible 9 Pin | EPSON-FX |
| Epson DFX-5000 | EPSON-FX |
| Epson DFX-5000+ | EPSON-FX |
| Epson DFX-8000 | EPSON-FX |

| | |
|---|---|
| Epson EPL-3000 | PJL-PCL5e |
| Epson EPL-4000 | HP-LASERJET |
| Epson EPL-4200 | PJL-PLC5e |
| Epson EPL-4300 | PJL-PLC5e |
| Epson EPL-5000 | HP-LASERJET |
| Epson EPL-5200 | PJL-PLC5e |
| Epson EPL-5200+ | PJL-PCL5e |
| Epson EPL-5600 | PJL-PCL5e |
| Epson EPL-6000 | HP-LASERJET |
| Epson EPL-7000 | HP-LASERJET |
| Epson EPL-7100 | HP-LASERJET |
| Epson EPL-8000 | PJL-PLC5e |
| Epson EPL-8100 | PJL-PLC5e |
| Epson EPL-9000 | PJL-PCL5e |
| Epson EX-1000 | EPSON-FX |
| Epson EX-800 | EPSON-FX |
| Epson FX-100 | EPSON-FX |
| Epson FX-100+ | EPSON-FX |
| Epson FX-1000 | EPSON-FX |
| Epson FX-105 | EPSON-FX |
| Epson FX-1050 | EPSON-FX |
| Epson FX-185 | EPSON-FX |
| Epson FX-2170 | EPSON-FX |
| Epson FX-286 | EPSON-FX |
| Epson FX-286e | EPSON-FX |
| Epson FX-80 | EPSON-FX |
| Epson FX-80+ | EPSON-FX |
| Epson FX-800 | EPSON-FX |

| | |
|---|---|
| Epson FX-85 | EPSON-FX |
| Epson FX-850 | EPSON-FX |
| Epson FX-86e | EPSON-FX |
| Epson GQ-3500 | HP-LASERJET |
| Epson JX-80 | EPSON-FX |
| Epson LQ-100 ESC/P 2 | EPSON-LQ |
| Epson LQ-100 Scalable Font | EPSON-LQ |
| Epson LQ-1000 | EPSON-LQ |
| Epson LQ-1010 | EPSON-LQ |
| Epson LQ-1050 | EPSON-LQ |
| Epson LQ-1060 | EPSON-LQ |
| Epson LQ-1070 ESC/P 2 | EPSON-LQ |
| Epson LQ-1070 Scalable Font | EPSON-LQ |
| Epson LQ-1070+ ESC/P 2 | EPSON-LQ |
| Epson LQ-1170 ESC/P 2 | EPSON-LQ |
| Epson LQ-1170 Scalable Font | EPSON-LQ |
| Epson LQ-150 ESC/P 2 | EPSON-LQ |
| Epson LQ-1500 | EPSON-LQ |
| Epson LQ-200 | EPSON-LQ |
| Epson LQ-2500 | EPSON-LQ |
| Epson LQ-2550 | EPSON-LQ |
| Epson LQ-400 | EPSON-LQ |
| Epson LQ-450 | EPSON-LQ |
| Epson LQ-500 | EPSON-LQ |
| Epson LQ-510 | EPSON-LQ |
| Epson LQ-550 | EPSON-LQ |
| Epson LQ-570 ESC/P 2 | EPSON-LQ |
| Epson LQ-570 Scalable Font | EPSON-LQ |

| | |
|---|---|
| Epson LQ-570+ ESC/P 2 | EPSON-LQ |
| Epson LQ-800 | EPSON-LQ |
| Epson LQ-850 | EPSON-LQ |
| Epson LQ-850+ | EPSON-LQ |
| Epson LQ-860 | EPSON-LQ |
| Epson LQ-870 ESC/P 2 | EPSON-LQ |
| Epson LQ-870 Scalable Font | EPSON-LQ |
| Epson LQ-950 | EPSON-LQ |
| Epson LX-300 | EPSON-FX |
| Epson LX-1050 | EPSON-FX |
| Epson LX-400 | EPSON-FX |
| Epson LX-80 | EPSON-FX |
| Epson LX-86 | EPSON-FX |
| Epson LX-800 | EPSON-FX |
| Epson LX-810 | EPSON-FX |
| Epson LX-850 | EPSON-FX |
| Epson LX-850+ | EPSON-FX |
| Epson MX-100 | EPSON-FX |
| Epson MX-80 F/T | EPSON-FX |
| Epson MX-80 | EPSON-FX |
| Epson RX-100 | EPSON-FX |
| Epson RX-100+ | EPSON-FX |
| Epson RX-80 | EPSON-FX |
| Epson RX-80 F/T | EPSON-FX |
| Epson RX-80 F/T+ | EPSON-FX |
| Epson SQ-1170 ESC/P 2 | EPSON-SQ |
| Epson SQ-1170 Scalable Font | EPSON-SQ |
| Epson SQ-2000 | EPSON-SQ |

| | |
|---|---|
| Epson SQ-2500 | EPSON-SQ |
| Epson SQ-2550 | EPSON-SQ |
| Epson SQ-850 | EPSON-SQ |
| Epson SQ-870 ESC/P 2 | EPSON-SQ |
| Epson SQ-870 Scalable Font | EPSON-SQ |
| Epson T-1000 | EPSON-FX |
| Epson T-750 | EPSON-FX |
| | |
| [Fujitsu] | |
| Fujitsu Breeze 100 | DJ-4812 |
| Fujitsu Breeze 200 | DJ-4812 |
| | |
| [HP] | |
| HP Color LaserJet | PJL-PCL5e |
| HP Color LaserJet 5 | PJL-PCL5e |
| HP Color LaserJet 5M | PJL-PCL5e |
| HP Color LaserJet 5/5M PS | PJL-PS |
| HP CopyJet | PJL-PCL5e |
| HP DeskJet 1200C | PJL-PCL5e |
| HP DeskJet 1600C | PJL-PCL5e |
| HP DeskJet 310 | HP-DESKJET |
| HP DeskJet 320 | HP-DESKJET |
| HP DeskJet 340 | HP-DESKJET |
| HP DeskJet 340 (Monochrome) | HP-DESKJET |
| HP DeskJet 500 | HP-DESKJET |
| HP DeskJet 500C | HP-DESKJET |
| HP DeskJet 510 | HP-DESKJET |
| HP DeskJet 520 | HP-DESKJET |
| HP DeskJet 540 | HP-DESKJET |

| | |
|---|---|
| HP DeskJet 540 (Monochrome) | HP-DESKJET |
| HP DeskJet 550C | HP-DESKJET |
| HP DeskJet 560C | HP-DESKJET |
| HP DeskJet 600 | HP-DESKJET |
| HP DeskJet 600 (Monochrome) | HP-DESKJET |
| HP DeskJet 660C | HP-DESKJET |
| HP DeskJet 850C | PJL-PLC5e |
| HP DeskJet 855C | PJL-PLC5e |
| HP DeskJet Plus | HP-DESKJET |
| HP DeskJet Portable | HP-DESKJET |
| HP DeskJet | HP-DESKJET |
| HP LaserJet 2000 | HP-LASERJET |
| HP LaserJet 4 | PJL-PCL5e |
| HP LaserJet 4M | PJL-PCL5e |
| HP LaserJet 4/4M PS | PJL-PS |
| HP LaserJet 4/4M PS (300 dpi) | PJL-PS |
| HP LaserJet 4 Plus | PJL-PCL5e |
| HP LaserJet 4M Plus | PJL-PCL5e |
| HP LaserJet 4/4M Plus PS 300 | PJL-PS |
| HP LaserJet 4/4M Plus PS 600 | PJL-PS |
| HP LaserJet 4L | PJL-PCL5e |
| HP LaserJet 4ML | PJL-PCL5e |
| HP LaserJet 4L/4ML PostScript | PJL-PS |
| HP LaserJet 4P | PJL-PCL5e |
| HP LaserJet 4MP | PJL-PCL5e |
| HP LaserJet 4P/4MP PS | PJL-PS |
| HP LaserJet 4P/4MP PS (300 dpi) | PJL-PS |
| HP LaserJet 4Si | PJL-PCL5e |

| | |
|---|---|
| HP LaserJet 4Si MX | PJL-PCL5e |
| HP LaserJet 4Si/4Si MX PS | PJL-PS |
| HP LaserJet 4Si/4Si MX PS (300 dpi) | PJL-PS |
| HP LaserJet 4V | PJL-PCL5e |
| HP LaserJet 4MV | PJL-PCL5e |
| HP LaserJet 4V/4MV PostScript | PJL-PS |
| HP LaserJet 5 | PJL-PCL5e |
| HP LaserJet 5M | PJL-PCL5e |
| HP LaserJet 5N | PJL-PCL5e |
| HP LaserJet 5/5M PostScript | PJL-PS |
| HP LaserJet 5L | PJL-PCL5e |
| HP LaserJet 5P | PJL-PCL5e |
| HP LaserJet 5MP | PJL-PCL5e |
| HP LaserJet 5P/5MP PostScript | PJL-PS |
| HP LaserJet 5Si | PJL-PCL5e |
| HP LaserJet 5Si MX | PJL-PCL5e |
| HP LaserJet 5Si/5Si MX PS | PJL-PS |
| HP LaserJet 500+ | HP-LASERJET |
| HP LaserJet IID PostScript Cartridge v52.2 | POSTSCRIPT |
| HP LaserJet IID | HP-LASERJET |
| HP LaserJet III PostScript Cartridge v52.2 | POSTSCRIPT |
| HP LaserJet III PostScript Plus v2010.118 | POSTSCRIPT |
| HP LaserJet III | HP-LASERJET |
| HP LaserJet IIID PostScript Cartridge v52.2 | POSTSCRIPT |
| HP LaserJet IIID PostScript Plus v2010.118 | POSTSCRIPT |
| HP LaserJet IIID | HP-LASERJET |
| HP LaserJet IIIP PostScript Cartridge v52.2 | POSTSCRIPT |
| HP LaserJet IIIP PostScript Plus v2010.118 | POSTSCRIPT |

| | |
|---|---|
| HP LaserJet IIIP | HP-LASERJET |
| HP LaserJet IIISi PostScript v52.3 | POSTSCRIPT |
| HP LaserJet IIISi | HP-LASERJET |
| HP LaserJet IIP | HP-LASERJET |
| HP LaserJet IIP Plus | HP-LASERJET |
| HP LaserJet IIP PostScript Cartridge v52.2 | POSTSCRIPT |
| HP LaserJet | HP-LASERJET |
| HP LaserJet Plus | HP-LASERJET |
| HP LaserJet Series II | HP-LASERJET |
| HP OfficeJet | HP-DESKJET |
| HP PaintJet XL 300 | PJL-PLC5e |
| | |
| [IBM] | |
| IBM 4039 LaserPrinter | PJL-PLC5e |
| IBM 4039 LaserPrinter Plus | PJL-PCL5e |
| IBM ExecJet 4076 II | HP-DESKJET |
| IBM Proprinter | PROPRINTER |
| IBM Proprinter II | PROPRINTER |
| IBM Proprinter III | PROPRINTER |
| IBM Proprinter X24 | PROPRINTER |
| IBM Proprinter X24e | PROPRINTER |
| IBM Proprinter XL II | PROPRINTER |
| IBM Proprinter XL III | PROPRINTER |
| IBM Proprinter XL | PROPRINTER |
| IBM Proprinter XL24 | PROPRINTER |
| IBM Proprinter XL24e | PROPRINTER |
| | |
| [Kodak] | |
| Kodak EktaPlus 7016 | HP-LASERJET |

| | |
|---|---|
| | |
| [Kyocera] | |
| Kyocera FS-1500 / FS-1500A | HP-4822 |
| Kyocera FS-1700 | PJL-PCL5E-48XX |
| Kyocera FS-1700 (KPDL) | PJL-PS-48XX |
| Kyocera FS-1700 (KPDL-2) | PJL-PS-48XX |
| Kyocera FS-3700 | PJL-PCL5E-48XX |
| Kyocera FS-3700 (KPDL) | PJL-PS-48XX |
| Kyocera FS-3700 (KPDL-2) | PJL-PS-48XX |
| | |
| [Lexmark] | |
| Lexmark 4039 LaserPrinter Plus | PJL-PCL5e |
| Lexmark ExecJet IIc | HP-DESKJET |
| Lexmark ValueWriter 600 | PJL-PLC5e |
| | |
| [Mannesmann] | |
| Mannesmann Tally MT 92 | HP-DESKJET |
| Mannesmann Tally MT 92C | HP-DESKJET |
| Mannesmann Tally MT 98/99 | HP-DESKJET |
| Mannesmann Tally MT 904 Plus | PJL-PLC5e |
| Mannesmann Tally MT 908 | PJL-PLC5e |
| Mannesmann Tally T9005 Plus | PJL-PLC5e |
| Mannesmann Tally T7010 | DJ-4812 |
| Mannesmann Tally T7018 | DJ-4812 |
| Mannesmann Tally T7040 (Colour) | DJ-4812 |
| Mannesmann Tally T7040 (Mono) | DJ-4812 |
| Mannesmann Tally T9008 | PJL-PCL5e |
| Mannesmann Tally T9017 | PJL-PLC5e |
| | |

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|---|---|
| [Minolta] | |
| Minolta SP 3000 | PJL-PLC5e |
| Minolta SP 3500 | PJL-PLC5e |
| | |
| [NEC] | |
| NEC Jetmate 400 | DJ-4812 |
| NEC Jetmate 800 | DJ-4812 |
| NEC Silentwriter LC 860 Plus | HP-9022 |
| NEC Silentwriter LC 860 | HP-9022 |
| NEC Silentwriter S102 | PJL-PLC5e |
| | |
| [Oki] | |
| OKI OJ-300C | HP-DESKJET |
| Oki OL-1200ex | PJL-PCL5e |
| OKI OL-400 | HP-LASERJET |
| Oki OL-410 | PJL-PLC5e |
| Oki OL-410ex | PJL-PLC5e |
| Oki OL-600ex | HP-LASERJET |
| Oki OL-610ex | PJL-PCL5e |
| OKI OL-800/840 | HP-LASERJET |
| Oki OL-810 | PJL-PLC5e |
| Oki OL-810ex | PJL-PCL5e |
| Oki OL-870 | PJL-PLC5e |
| | |
| [Okidata] | |
| Okidata LaserLine 6 | HP-LASERJET |
| Okidata OL-1200 | PJL-PCL5e |
| Okidata OL-400 | HP-LASERJET |
| Okidata OL-410e | PJL-PLC5e |

| | |
|---|---|
| Okidata OL-600e | HP-LASERJET |
| Okidata OL-610e | PJL-PCL5e |
| Okidata OL-800 | HP-LASERJET |
| Okidata OL-810 | PJL-PLC5e |
| Okidata OL-810e | PJL-PCL5e |
| | |
| [Olivetti] | |
| Hermes H 606 | HP-LASERJET |
| Olivetti ETV 5000 | HP-LASERJET |
| Olivetti JP 150 | DJ-4812 |
| Olivetti JP 150 WS | DJ-4812 |
| Olivetti JP 250 | DJ-4812 |
| Olivetti JP 350 | DJ-4812 |
| Olivetti JP 350S | DJ-4812 |
| Olivetti JP 360 (Color) | DJ-4812 |
| Olivetti JP 360 (Monochrome) | DJ-4812 |
| Olivetti JP 450 (Color) | DJ-4812 |
| Olivetti JP 450 (Monochrome) | DJ-4812 |
| Olivetti JP 50 | DJ-4812 |
| Olivetti PG 108 | HP-LASERJET |
| Olivetti PG 208 M2 | HP-LASERJET |
| Olivetti PG 306 | HP-LASERJET |
| Olivetti PG 308 HS | HP-LASERJET |
| Olivetti PG 308 | HP-LASERJET |
| Olivetti PG 404 | PJL-PLC5e |
| Olivetti PG 408 | PJL-PLC5e |
| Triumph Adler SDR 7706 | HP-LASERJET |
| | |
| [Panasonic] | |

| | |
|---|---|
| Panasonic KX-P4410 | HP-LASERJET |
| Panasonic KX-P4420 | HP-LASERJET |
| Panasonic KX-P4430 | PJL-PLC5e |
| Panasonic KX-P4440 | PJL-PLC5e |
| Panasonic KX-P4450 | HP-LASERJET |
| Panasonic KX-P4450i | HP-LASERJET |
| Panasonic KX-P4451 | PJL-PLC5e |
| | |
| [Quad] | |
| QuadLaser I | HP-LASERJET |
| | |
| [Radio Shack] | |
| Radio Shack JP500 | DJ-4812 |
| Radio Shack JP1000 (Color) | DJ-4812 |
| Radio Shack JP1000 (Mono) | DJ-4812 |
| | |
| [Ricoh] | |
| Ricoh LP-1200 | PJL-PLC5e |
| | |
| [Royal] | |
| Royal CJP 450 | DJ-4812 |
| | |
| [Seikosha] | |
| SEIKOSHA SpeedJET 200 | DJ-4812 |
| | |
| [Sharp] | |
| Sharp JX-9300 | HP-LASERJET |
| Sharp JX-9460 | PJL-PLC5e |
| Sharp JX-9500 | HP-LASERJET |
| Sharp JX-9500E | HP-LASERJET |

| | |
|---|---|
| Sharp JX-9500H | HP-LASERJET |
| Sharp JX-9600 | PJL-PLC5e |
| Sharp JX-9660 | PJL-PLC5e |
| Sharp JX-9700 | HP-LASERJET |
| Sharp JX-9700E | PJL-PLC5e |
| | |
| [Star] | |
| Star LaserPrinter 4 III | PJL-PLC5e |
| Star LaserPrinter 4 | HP-LASERJET |
| Star LaserPrinter 5 EX | PJL-PLC5e |
| Star LaserPrinter 5 | HP-LASERJET |
| Star LaserPrinter 8 DB | HP-LASERJET |
| Star LaserPrinter 8 DX | HP-LASERJET |
| Star LaserPrinter 8 II | HP-LASERJET |
| Star LaserPrinter 8 III | PJL-PLC5e |
| Star LaserPrinter 8 | HP-LASERJET |
| | |
| [Tandy] | |
| Tandy LP-1000 | HP-LASERJET |
| | |
| [Tegra] | |
| Tegra Genesis | HP-LASERJET |
| | |
| [Texas Instruments] | |
| TI microMarc Advanced Mono | DJ-4812 |
| TI microMarc Color | DJ-4812 |
| TI microLaser 600 | PJL-PLC5e |
| | |
| [Toshiba] | |

| | |
| --- | --- |
| Toshiba GX-400 | PJL-PLC5e |
| Toshiba PageLaser12 | HP-LASERJET |
| | |
| [UNISYS] | |
| Unisys AP9210 | HP-LASERJET |
| | |
| [Wang] | |
| Wang LDP8 | HP-LASERJET |

# K. BSD protocol based interoperability

## *K.1 How to send a job from BS2000 by using RSO (in raw mode) to a Xprint NT printer with application of filter ?*

This is a possible solution :

Use the "TCP/IP" print server on Windows NT and define a printer with WPRINT sending the document with GIP2.

In the Wprint port definition , you can specify job options like for example, filter to be applied on Xprint.

## *K.2 BSD jobs sent to DPRINT are only printed when submitted from the host of the LOCAL Xprint BSD gateway*

If the jobs sent to DPRINT via BSD interoperability are accepted but not printed.

Check if the jobs submitted from the host of the LOCAL BSD gateway are printed but not the ones sent from another host. If it is the case, check the variables "LONGHOST" and "LONGUSER" in DPRINT config file: SYSSSI.DPRINTCM.010. These variables should be set to "YES" and the DPRINT subsystem should be restarted in order to solve this problem.

## *K.3 Jobs sent to printer with bsd fast filter remain ACTIVE forever.*

This results from a deadlock between fast filter and backend processing.

The solution consists of modifying the definition of each PCL used with a bsd fast filter (the path of PCL file is opt/Xprint/PCL/xpterm). The option to be adapted is "itfpo" and the new value is the following one:

itfpo= "JOB_ID *=*" "DEBUG *=*" "PCL *=*" "COMMENT *=-w"

Then you have to perform 'xpmod -pcl <PCL name> -fi xpterm' for each PCL used by a bsd fast filter device.

## *K.4 Gateway activation problem*

- A common problem, that can prevent you to activate a gateway, is when several gateways are using the same port number, which is set by the "-ga" option.

  You can easily check it by typing xpshow –gtw –scl "-ga 9999" where, for example, 9999 is the port number.

  This command will show you all the gateways using this address.

  You can only have one LOCAL gateway on a host using a given port number at a time.

- The same is true of other processes that could use this port.

You can check it with the "netstat –a | grep 9999" command, which returns you the list of the connections
using this port.

## *K.5 How to define a RSO printer using the protocol LPD ?*

**Configuration of RSO printers**

**Connecting a printer to BSD-LPD :**

A printer that is connected to a BSD-LPD must be defined with the SPSERVE statement ADD-SPOOL-DEVICE or MODIFY-SPOOL-DEVICE. To do this, the following operands are used. These operands are described in the "SPSERVE" [21] manual.
DEVICE-ACCESS = *TCP-ACCESS(...)
ACCESS-TYPE = *LPD(...)
LPD-PRINTER-NAME = *STD / <c-string 1..8>
,FROM-PORT-NUMBER = <integer 0..1024>
,TO-PORT-NUMBER = <integer 0..1024>
INTERNET-ADDRESS = *STD / <alphanum-name 1..32> /<composed-name 7..15>
PORT-NAME = *STD / <alphanum-name 1..8>

**Interdependencies with other operands :**

SYNCHRONIZATION=*PRINTER is not rejected but simply ignored. RSO automatically assumes the setting SYNCHRONIZATION=*NETWORK. RSO does not receive any infor-mation direct from the printer.
The dialog takes place exclusively between RSO and the BSD-LPD, i.e. synchronization is not possible between the sending of two messages (within the same print job). Similarly, POLLING=*YES is not rejected but simply ignored.
RSO automatically assumes POLLING=*NO, as printers administered by BSD-LPD cannot return information to RSO.
DISCONNECTION=*YES or DISCONNECTION=*NO is likewise not rejected but simply ignored. RSO automatically
assumes DISCONNECTION=*FORCE, in order to request the closing of the connection at the end of each print job.

**Completeness of printouts, restarting printouts :**

BSD-LPD printers and servers are supported only by the transfer of print jobs to the BSD-LPD server.
This is because RSO cannot monitor the processing of the print jobs. As soon as RSO receives a print request that is to be forwarded to a BSD-LPD server, the first thing RSO does is to create a temporary file containing all the data to be printed (header page, user data, trailer page, ...). This file is used to determine the value for the size of the print job. Once the temporary file has been created, RSO checks whether there is a BSD-LPD printer/server ready for a print job. If so, RSO reads the print data from the temporary file and sends it to the BSD-LPD
printer/server together with certain BSD-LPD protocol commands. If a DMS error occurs while creating the temporary
file, the print request is returned to the KEEP queue. If the print request is rejected by the BSD-LPD printer/server, RSO resumes processing of the print request from the beginning.

**Configuration of RSO printers**

If the print job is processed without errors, RSO clears the connection to the BSD-LPD printer/server and considers
the print job to have been successfully completed. Never-theless, the BSD-LPD printer/sesrver does not check through its internal print request queue until the connection to RSO has been cleared. This means that RSO has no possi-bility of monitoring the printing of the data once it has been passed to the BSD-LPD printer/server.
**Warning**

When printing to BSD-LPD protocol printers it is not possible to guarantee either a correct restart of the print operation
or a complete printout of the data. This is because RSO has no possibility of communicating with the printer.
As a result, it may happen that RSO regards a print job as successfully processed even though not a single page

has actually been printed.

**Restart rules :**

The printer error code "LpdJobAborted" has been introduced in order to draw attention to problems such as "request rejected", "timeout detected" etc. in dialog with a BSD-LPD. If this error code is displayed, the print job is entered in the KEEP queue. In addition, message SR00993 is issued if the printer status is queried by means of /SHOW-SYSTEM-STATUS INF=*REMOTE(...).
The standard restart action belonging to the error code "LpdJobAborted" is an automatic restart after detection of the error. The system administrator can change this behavior by specifying a new restart rule. The general action
codes available for this are STOP, SUSPEND and RESTART.

**EBCDIC-ASCII character conversion**

The BSD-LPD protocol expects data in ASCII code, but BS2000 files contain data in EBCDIC code. RSO has direct access to the BSD-LPD and therefore carries out this EBCDIC-ASCII conversion itself. It should be borne in mind that this conversion takes place character by character, i.e. each character is converted independently of the others. A conversion table can be found in the appendix, page 909. U2864-J-Z125-12-7600 171 SPOOL administrator/system administration **Configuration of RSO printers**

**Printing via a SINIX-SPOOL / Xprint BSD-LPD server :**

**Software configuration**
BS2000 BS2000 OSD V1
SPOOL V3.0B
RSO V3.0A
SPSERVE V2.0B
DCM V11.0
UNIX Xprint
*Note*
All the Xprint commands are described in the syntax of Xprint.

**Defining the operating environment :**

1. RSO definitions
The target printer must be defined with SPSERVE in RSO:
//ADD-SPOOL-DEVICE DEVICE-NAME=<logical-name>
// DEVICE-TYPE=<printer-type>,
// DEVICE-ACCESS=*TCP-ACCESS(
// INTERNET-ADDRESS=<lpd-internet-addresss>,
// PORT-NAME=<lpd-portnumber>,
// ACCESS-TYPE=*LPD(
// LPD-PRINTER-NAME=<lpd-printername>,
// FROM-PORT-NUMBER=<min. client-portnumber>,
// TO-PORT-NUMBER=<max. client-portnumber>)),
// ...
<lpd-internet-addresss>
The Internet address of the BSD-LPD servers, for XPRINT the Internet address of the host running the BSD-LPD server. The address is either the IP address in point-decimal notation or the sockect host name of the the UNIX host as generated via BCAM (in the BS2000 RDF file or the SOCKETHOST address table).

**Configuration of RSO printers**

<lpd-portnumber>
The port number via which the BSD-LPD server is addressed. In RFC 1179, the value 515 is recommended. In Xprint,
the same port number must be used, see *xpadd -gtw* command option *-ga*. This option has no preset value.
<lpd-printername>
The name of the printer on which RSO should print via the BSD-LPD server. The printer name used in the configuration
of the BSD-LPD server must be entered. For Xprint, this is any Xprint device name.
<min. client-portnumber>

The smallest permissible port number from the BSD-LPD server for its BSD-LPD client (i.e. RSO); the preset value is 721. For Xprint, see option *-op* of the *xpadd -gtw* command.
<max. client-portnumber>
The largest permissible port number from the BSD-LPD server for its BSD-LPD client (i.e. RSO); the preset value is 731. For Xprint, see option *-op* of the *xpadd -gtw* command.

2. BCAM defintions :
The UNIX host running the BSD-LPD server must be defined and activated via the RDF file or the SOCKETHOST address table.

3. Defining gateways for Xprint :
Two different gateways must be defined: a local one that defines the BSD-LPD server, and a partner gateway that RSO defines as client for the BSD-LPD server. The local gateway is defined as follows:

xpadd -gtw <localer gateway-name>
-aa
-pp BSD
-ga <lpd-portnumber>
-ag <permissible partner>
-ho <BSD-LPD-server-hostname>
-op "PI=<min. client-portno>" "PA=<max. client-portno>"
<localer gateway-name>
Logical name of the local gateway, i.e. of the BSD-LPD server.
-aa Automatically activates the local gateway, i.e. the BSD-LPD servers when Xprint is started. If *-aa* was not specified, the *xpchange -gtw* command must be specified explicitly.

**Configuration of RSO printers**

<lpd-portnumber>
The port number via which the local gateway, i.e. the BSD-LPD server is addressed. In RFC 1179, the value 515 is recommended.
<BSD-LPD-server-hostname>
The name of the host running the local gateway, i.e. the BSD-LPD server. This name is defined as the Xprint 'Host'
object.
<permissible partner>
The list of permissible partner gateways, i.e. BSD-LPD clients (e.g. RSO) which are allowed to address the local gateway, i.e. the BSD-LPD server.
<min. client-portno>
The smallest port number from the local gateway, i.e. the BSD-LPD server, that is permissible for the partner gateway (the BSD-LPD client, i.e. RSO).
<max. client-portno>
The largest port number from the local gateway, i.e. the BSD-LPD server, that is permissible for the partner gateway (the BSD-LPD client, i.e. RSO). The partner gateway is defined as follows:

xpadd -gtw <partner-gateway-name>
-pp BSD
-tp PARTNER
-bl <localer gateway-name>
-ho <BSD-LPD-client-hostname>
<partner-gateway-name>
Logical name of the partner gateway (the BSD-LPD client, i.e. RSO).
<lokaler gateway-name>
The name used to address the local gateway, i.e. the name of the BSD-LPD servers.
<BSD-LPD-client-hosdtname>
The name of the host running the partner gateway, i.e. the BSD-LPD client RSO. The name that is also used in the file /etc/hosts or in the naming service (e.g. DNS) must be entered.

4. For Xprint: enter BS2000 system in /etc/hosts or in the naming service.
The host name of the BS2000 system running RSO, and its Internet address must either be entered in the file /etc/hosts or in the naming service (e.g. DNS) of the UNIX host running the Xprint BSD-LPD server (the local gateway).

**Configuration of RSO printers**

**Execution example**
The following example summarizes the definitions of the operatin environment required to give RSO V3.0A access
to a 4822 Printer that is controlled from a UNIX host. RSO V3.0A accesses the printer via the Xprint-BSD gateway server running on the UNIX host.

**Configuration of RSO printers**

Definition of the printer
(1) Use SPSERVE to define a printer for BSD-LPD
```
//A-S-D DEV-NAME=LPDXPPCL,
DEV-TYPE=*4822-PCL
DEV-ACC=*TCP(
INT-ADD=SNXH1,
PORT-NAME=515,
ACC-TYPE=*LPD(
LPD-PR-NAME='pcl4822',
FROM-PORT-NUM=0,
TO-PORT-NUM=1023)), ...
//A-S-F STD,*4822-PCL, ...
```
(2) Define a UNIX host with a BSD-LPD server
```
/BCIN SINIX1,SOKHOST=SNXH1, ...
```
Definitions in UNIX
(3) Define the local gateway
```
xpadd -gtw BSDSRV
-aa
-pp BSD
-ga 515
-ag ALL
-ho SNXH1
-op "PI=0" "PA=1023"
```
(4) Define the partner gateway
```
xpadd -gtw BSDRSO
-pp BSD
-tp PARTNER
-bl BSDSRV
-ho BS2H1
```
(5) Mount the printer pcl4822 in Xprint
```
xpadd -dev pcl4822 ...
```
(6) Enter the BS2000 system in /etc/hosts or in the naming service

**Configuration of RSO printers**

*Using the printer*
(7) Once these definitions have been made, it is possible for the BS2000 processor to initiate print jobs sent to the printer LPDXPPCL. The printer is controlled by the UNIX host SNXH1.
```
/PRINT-DOCUMENT myfile,PRINTER-NAME=LPDXPPCL, ...
```
However, it should be borne in mind that support of BSD-LPD printers by RSO V3.0A covers only the allocation of print jobs. Execution of the jobs cannot be monitored.This means: once RSO has successfully passed a complete print job to the BSD-LPD server, it closes the connection and considers the job as having been processed, even though nothing has actually been printed yet. Not until the connection has been closed does the BSD-LPD server begin to search its queues for print jobs which contain the print request from RSO

## Transparent support for a new printer by RSO

Support for a new printer does not just mean installing the printer with the aid of the operating instructions. From the RSO viewpoint, a printer is characterized not only by the functions and language(s) that it supports. The access mode is an important aspect of how the printer in question is supported by RSO. Printing a file does not simply consist in sending data to a printer. It involves establishing the virtual connection, the dialog with the printer controller (sending, and receiving return messages), sending the data (comprising text and print

control characters) to the printer, and finally conversion of this data by the printer (according to the printer language).

**Establishing the connection**
Before a dialog can commence with the printer controller, a logical connection must be established between RSO and the printer (definition of the communication attributes of the two partners).
In order to access the printer, RSO must know the communication attributes of the partner. The RSO access modes
are used for this purpose. The RSO access mode actually serves a dual purpose in that it describes the communication attributes of the partner (for estab-lishing the logical connection) and simultaneously defines which
"header" (printer control protocol) must be prefixed to each message to the printer (for the printer controller dialog).
It is absolutely essential for operation of the printer that the RSO access mode definition for the printer match the definition of the printer in PDN (applicable to printers accessed via TRANSDATA-NEA). RSO currently supports
the following different access modes:
1. HARDCOPY
2. HARDCOPY-9751
3. DIRECT
– with BAM converter
– with HDLC-AFP converter
4. HDLC
5. APPLICATION
6. PC
7. TACLAN

## *K.6 What is the maximum number of partner gateways in Xprint ?*

There is no limit fixed by Xprint.

But if you prefer not to have to many gateways objects, you can define several hosts in the same partner gateway.

Metacharacters as "*" can be used with the option " -oh hosts-name* ", as it is the case for the WPRINT gateway partner.

# L. Xprint (GIP2) protocol based interoperability (except with Dprint)

## *L.1 Gateway activation problem*

- A common problem, that can prevent you to activate a gateway, is when several gateways are using the same port number, which is set by the "-ga" option.

  You can easily check it by typing xpshow –gtw –scl "-ga 9999" where, for example, 9999 is the port number.

  This command will show you all the gateways using this address.

  You can only have one LOCAL gateway on a host using a given port number at a time.

- The same is true of other processes that could use this port.

  You can check it with the "netstat –a | grep 9999" command, which returns you the list of the connections using this port.

## *L.2 What is the maximum number of partner gateways in Xprint ?*

There is no limit fixed by Xprint.

But if you prefer not to have to many gateways objects, you can define several hosts in the same partner gateway.

Metacharacters as "*" can be used with the option " -oh hosts-name* ", as it is the case for the WPRINT gateway partner.

# M. Interoperability with Dprint

Please visit the web site of fujitsu-siemens to get the DPRINT manuals.

http://www.fujitsu-siemens.com/products/software/doc_printing/bs2000osd/dprint.html

# N. Graphical Administration Interface (Mercator)

## *N.1 Missing libraries at Mercator start*

The start of Mercator V6 displays sometimes error messages of the form

*dynamic linker: mais: can't find libCstd.so.1*

or

*libCrun.so.1 file is missing at mercator start*

Actually, Xprint 6.0A is partially built on C++ (Mercator interface for example)

It appears now that on some platforms, packages must be installed on the system in order to gathers the missing libraries and properly run C++ application.

- On Solaris Sparc the *SUNWlibC* package has to be installed in order to use Mercator. It is shipped with the Solaris operating system.

This package installs (among other things...) the missing library.

- On Solaris Sparc 5.7 only, you have to install the patch 106327-08. You can download this patch on the following web site : http://access1.sun.com/patch.public/ .

- On Reliant Unix the package CDS++RTS must be installed in order to use Mercator.

## *N.2 Problem when starting Mercator ?*

If you start Mercator and get the error message "mercator: can't open display, exiting...", it's a problem of authorization restrictions set in your X11 environment.
In a shell window, execute the following commands to allow other programs to use the X11 graphical display:

DISPLAY=<hostname>:0
EXPORT DISPLAY

Where <hostname> must be replaced by the name of your host.

…and start again Mercator

# O. Wprint

## *O.1 Controlling printer access for Wprint User.*

The owners of Wprint print jobs cannot be defined as Xprint users.

If you attach an access list to a Xprint device, the Wprint

job submission requests for this device will be rejected.

A work around can be to configure the gateways to allow

only certain windows PCs to submit requests. This can be done by

the option -oh of the partner gateway definition. You can use wildcards

for this option, but no value list is supported.

## *O.2 Registry in Windows grows with every Wprint job*

If Wprint Manager is not started or is started, but no refresh is done, the jobs remain in the registry.

If the customer never starts Wprint Manager, he can disable the option *'Print Management*' in the Wprint port properties for the selected printer.

Therefore, no jobs will be recorded in the registry for this printer.

That also means that those jobs will never appear in Wprint Manager…

# P. WebPrint

## P.1 HTTP error 403, you are not authorized to view this page

If your Web server is misconfigured, you can get this HTTP error message when you try to access the WebPrint PrinterList or JobList pages.

For example with an Apache Web server, you must be sure that the sections `Alias` and `ScriptAlias` of the Apache configuration file `srm.conf` are correctly defined and that the directories of the WebPrint binaries are specified in the file `access.conf` with "`Options ExecCGI`". If we suppose that WebPrint server has been installed in directory `/opt/WebPrintServer,` you can see here below a typical Apache Web server configuration.

in file srm.conf:

```
Alias /WebPrint/ "/opt/WebPrintServer/"
Alias /WebPrint/conf/ "/opt/WebPrintServer/conf/"
Alias /WebPrint/docs/ "/opt/WebPrintServer/docs/"

ScriptAlias /WebPrint/admbin/ "/opt/WebPrintServer/admbin/"
ScriptAlias /WebPrint/bin/ "/opt/WebPrintServer/bin/"
```

in file access.conf:

```
<Directory /opt/WebPrintServer/bin >
AllowOverride None
Options ExecCGI
</Directory>

<Directory /opt/WebPrintServer/admbin >
AllowOverride None
Options ExecCGI
</Directory>
```

Note that all those specifications can also be defined in the Apache configuration file `httpd.conf` instead of `srm.conf` and `access.conf`.

## P.2 XP000065: Syntax error in addition structure

When you try to print from a windows client to a WebPrint Server running on Linux, the following message could be displayed:

*Cannot submit document "xxx" for printing.*

*XP000065: Syntax error in addition structure*

The problem occurs if the Apache WebServer is running under the account wwwrun with nogroup.

This is default on the SuSe 6.4 distribution.

The solution is to create a new User for the Webserver and change the User and Group in the httpd.conf

# Q. Diagnose

## *Q.1 How to grant access to Xprint log files to a specific group*

Issue the command xpgrant.

- xpgrant – without parameters, the log files & debug files are made readable/writable to any user.

- xpgrant <groupid> - with the groupid parameter, every user belonging to the specified group will have the read/write permissions on Xprint's log & debug files.

Note that the dynamic log & debug files created after the execution of xpgrant will automatically use the specified group as group of the file.

## *Q.2 How to troubleshoot an Xprint problem*

Without the DMG components

The commands :

$XPRINT_HOME/goodies/tools/xplog – lists all the existing log files
$XPRINT_HOME/goodies/tools/xpdbg – lists all the existing debug files
$XPRINT_HOME/goodies/tools/xpclean – empties all the log & debug files
$XPRINT_HOME/goodies/tools/xpcollect – collects all the logging/debugging information into file /tmp/logdbg

are at your disposal to perform a first diagnose and to collect all the necessary information before reporting the problem to the OSL support.

Xprint produces logging information on its own. If you need more accurate information about a problem, you can add the flag/value "-dg DBG_CL_SIM" at the end of the command causing the problem. This will generate debug files that you will be able to analyse and send us afterwards.

It is also possible to use this flag on the servers, supervisors and gateways. When you want to activate the debugging for a specific supervisor, you have to proceed like this:

- Deactivate the supervisor
- xpchange –spv <the_supervisor> -dg DBG_CL_SIM

To disable the debugging, just perform a usual xpchange command. Besides the DGB_CL_SIM value, there are also two other possibilities

- DBG_KY when testing licenses
- DBG_SP_SIM to know exactly what is sent to a printer

## Q.3 How to make the difference between Xprint & system error messages?

The system errors are always preceeded by “errno”.

## Q.4 How to get debugging for the DMG Server

The file $APACHE_HOME/logs/error_log contains all the errors encountered by the Apache web server. It is necessary to purge this file from time to time.

## Q.5 How to get debugging for the DMG Anchor – callback libraries

If the DMGAnchor package is installed, you should find the directory $XPRINT_HOME/CB/. This directory should already contain a few log files. Here is a non-exhaustive list of the log files you might discover and their meaning

- MyDBCallbacklib.log (log file of the database manager callbacks)
- MyDACallbacklib.log (log file of the Xprint daemon callbacks)

By creating manually a corresponding .dbg file, you will activate the debugging for these components. So, for instance, the commands:

- touch MyDBCallbacklib.dbg
- chmod 777 MyDBCallbacklib.dbg (or give the write permission to the user bin)

That will activate the debugging for the callbacks pertaining to the DB Manager component. According to your Xprint configuration, you will also find log files pertaining to Xprint entities such as the supervisors and the servers. These log files are named this way:

- <objectname>_My<object type>Callbacklib.log

So, if for instance, you have a supervisor named “faqspv”, you should find the corresponding log file faqspv_MySPCallbacklib.log.

Once again, by creating the corresponding .dbg file, you’ll activate the debugging for this component.

## Q.6 How to get debugging for the DMG Anchor – request processor

Create the environment variable PROC_DBG

On Unix/Linux

- PROC_DBG=YES
- export PROC_DBG
- Start Xprint normally

On Windows

- Go to the properties of the “My computer” icon and click on the “Advanced” tab, there click on the button “Environment variable”. Create PROC_DBG in the system list and start Xprint normally.

On all the platforms

- xpstart –dg DBG_CL_SIM

You will need to restart Xprint whatever method you have chosen.
The file $XPRINT_HOME/RP/Xprint.dbg contains the debugging information.

## *Q.7 How to get debugging for the DMG Relay – request distributor*

Create the environment variable DIST_DBG

On Unix/Linux

- DIST _DBG=YES
- export DIST _DBG
- edit the /etc/inittab file, put the Xp_Distributor line in comment, save the file and kill the Xp_Distributor process (kill –1 1).
- Edit the /etc/inittab file again, remove the comment, save the file and make a kill –1 1 (for the process init) to restart the Distributor.
-

On Windows

- Go to the properties of the “My computer” icon and click on the “Advanced” tab, there click on the button “Environment variable”. Create DIST _DBG in the system list.

Start the distributor with –dg DBG_CL_SIM

On Unix/Linux

- Edit the file /etc/inittab and add at the end of the Xp_Distributor line, the argument “ –dg DBG_CL_SIM”, put this line in comment, save the file and kill the Xp_Distributor process (kill -1 1)
- Edit the /etc/inittab file again, remove the comment, save the file and make a kill –1 1 (for the process init) to restart the Distributor.

On windows

Go to the properties of the “My computer” icon and click on the “Advanced” tab, there click on the button “Environment variable”. Create DIST _DBG in the system list. Restart the DMG_Distributor service.

All the debug information is written in $DMGRelay_HOME/Xp_Distributor.dbg.

## *Q.8 How to get debugging for the DMG Relay – callback collector*

Create the file Xp_Collector.dbg in the directory $DMG_COLLECTOR_HOME/

- touch Xp_Collector.dbg
- chmod 777 Xp_Collector.dbg (or give the write permission to the user who started the collector)

## *Q.9 How to get debugging for the DMG Interface*

You will find a few log files in $DMG_SERVER_HOME/LOG/

- xpCallback.log – provides you with information about the callback retrieved and processed by the DMG Interface

- xpStartgui.log – provides you with information about the users connections.

You can get debugging information regarding the callbacks retrieved and processed by the DMG Interface by editing the file $DMG_SERVER_HOME/CALLBACK/xpIni.ini and by setting up the directive “debug” to “TRUE”.

## *Q.10 How to get debugging from the callback daemon*

This operation can only be done if requested by the development team. Edit $DMG_HOME/DAEMON/callbackDaemon.php, switch the constant “DEBUGMODE” to true.

You can find the debugging information in the following file:
$DMG_SERVER_HOME/LOG/callBackDaemonDefaultLog.log

## *Q.11 How to get debugging for xpexpimpdata:*

For this unix shell script two levels for diagnose are possible:

- Track the processing

Create the following file: /tmp/.xpexpimpdata.log using the touch command. Xpexpimpdata will write information about the processing into that file.

- To get a deeper level of diagnosis information (set –x output)

Create the following file: /tmp/.xpexpimpdata.debug using the touch command. Xpempimpdata will write complete information about the processing and the commands that are executed into that file.

To switch either the logging either the debugging to OFF, just remove the corresponding file.

## *Q.12 How to report a problem*

Please provide OSL with all these pieces of information.

This will give OSL ways to speed up problem fixing and provide you with appropriate and high quality support.

1. Problem description

Please describe the problem, its context and the command(s) which cause the problem, and write down the accurate and complete error message and any error number.

If a core file was created in any subdirectory of $XPRINT_HOME, please send it with the binary which created it

Please also mention the platform, OS version.

Send the Xprint accurate version (with installed EKS)

On all the platforms, you can list the content of the file $XPRINT_HOME/.prod_des

If the problem is about printing, the print file at the origin of the problem can help to detect the location of problem

2. Logging

Each time something wrong happens, an entry is recorded in the Xprint.log file, which is located in a subdirectoryof /var/spool/Xprint/config

The "xplog" command (/var/spool/Xprint/goodies/tools) gives you the complete list of existing Xprint.log files.

It is recommanded that you empty all .log and .dbg files in your Xprint system with the "xpclean" command (/var/spool/Xprint/goodies/tools) before reproducing the problem.

When you have reproduced the problem and generated the necessary logging information, you can send us the resulting log files by creating an archive as follows

cd $XPRINT_HOME

find . -name "*.log" -print | cpio -ocvBd > /tmp/Xplog

3. Debugging

If the problem can be reproduced please recall the command with the option " -dg DBG_CL_SIM". The “xpdbg” command will help you to localize the .dbg file.

These files will also be very usefull.

In order to transmit those files to OSL, please execute the following sequence of commands:

cd $XPRINT_HOME

find . -name "*.dbg" -print | cpio -ocvBd > < /tmp/Xpdbg

4. Xprint configuration

In /var/spool/Xprint/goodies/tools, there is a script xpdbls.

Execute this script, and redirect the output in a file: /var/Xprint/goodies/tools/xpdbls > /tmp/Xprint.config

Of course, it still remains possible that we ask you for further information

How to get debugging information with the BSD fast filter?

There are several ways to do that:

- To get debugging information for all the printers using the BSD fast filter

```
xpmod -flt bsd -op "LOGIN *=*" "PRINTER *=*" "DOC_REF *=*" "COMMENT *=-debug"
"TITLE *=*"
```

- To get debugging information for only one printer using the BSD fast filter

```
xpcopy -flt bsd bsd2
xpmod -flt bsd2 -op "LOGIN *=*" "PRINTER *=*" "DOC_REF *=*" "COMMENT *=-
debug" "TITLE *=*"
xpmod -dev <your_device> -fl bsd2
```

```
The resulting debug files can be found within the printer directory.
```

# R. Installation – DMG

## *R.1 What are the different architectural possibilities about the DMG components installation?*

The DMG components are independent and may be installed on separate machines. They are splitted over three installation packages.

- The DMG Anchor containing the callback libraries and the request processor
- The DMG Relay containing the callback collector and the request distributor
- The DMG Server containing Apache, PHP5 and the DMG Interface

- The DMG Anchor package must be installed on a machine where Xprint is running

- The callback collector and the request distributor can be installed on a separate machine despites of the fact that they belong to the same package (DMG Relay). They can be installed on a machine not running an Xprint system. There is however an exception regarding windows because on windows both the callback collector and the request distributor must be installed on a system where Xprint is running.

- The DMG Server can be installed on any machine that is network reachable.

According to the customer needs and to the above explanation, you could for instance follow these isntallation scenarios:

- One machine to install all the packages

  Xprint core + DMG Anchor + DMG Relay + DMG Server on the same machine. This installation scenario is only applicable to configurations that do not need much resource.

  This scenario is the easiest one to configure but the less interesting in terms of performance.

- An Xprint domain and a dedicated machine for all the DMG components

  DMG Relay + DMG Server on a dedicated machine. This machine has to be network reachable. This scenario is more efficient than the previous one because the work load is spread over several machines.

- An Xprint domain and two dedicated machines

If the DMG has to be used over the internet, the DMG server has to be installed in a DMZ. In this case, installing the DMG Relay on a machine located in the intranet will greatly ease the Firewall configuration. Note that in this case the DMG Relay package can also be installed on one machine of the Xprint domain

## R.2 How can I bind the DMG components?

As the DMG components can be installed on separate machine, you will need to bind them yourself. The DMG components may be considered as a chain and each component is a link of that chain. To build that chain, you have to configure a special Xprint loadable resource. This LRS can be easily created thanks to specific tools delivered along with Xprint 8.

On Unix/Linux platforms:

- run the command $XPRINT_HOME/cmd/xpconf_dmg

On Windows:

- Open the HTML file $XPRINT_HOME/cmd/DMG_Conf.html with any browser that is able to launch the java virtual machine.

With both tools, you will have to provide the same information.

COLLECTOR_HOST – Name of the host where the callback collector has been installed (needed by the callback libraries)

COLLECTOR_PORT – Port number used by the callback collector. By default 9300 (needed by the callback libraries)

GUISRV_HOST – Name of the host where the DMG Server has been installed
(needed by the callback collector)

GUISRV_PORT – Port number used by the DMG Server's embedded web server. By default 80
(needed by the callback collector)

GUISRV_PATH – Relative path to the PHP script to be called by the callback collector.
DISTRIBUTOR_HOST

## R.3 Is the DMG, a client-server application?

Yes, the DMG Server is made of an Apache web server including a PHP5 module. The clients are Firefox web browsers and they communicate with the server via the HTTP and the HTTPS procotols. The server is only installed on one machine while the clients may be installed everywhere and their number may vary according to the needs of the customer.

## What do we need to change within the configuration of Firefox in order to be able to log on to the DMG?

Firefox is the preferred web browser when using the DMG Interface. Mozilla is also supported but is a bit heavier than firefox.

Here is a list of configuration changes you should do before using the DMG Interface

- Authorizing popup windows for the DMG Interface

  Click on Tools -> Options -> Web features, click on the button labelled “Allowed site” in front of the “Block popup Windows” option and add the address of the DMG Interface.

- Bypassing your proxy server to logon to the DMG Interface.

  To bypass your proxy server, click on Tools -> Options -> General -> Connexion Settings. In this screen, you might either chose to click on “direct connexion to the internet”, either to add the address of the DMG Interface in the textbox labelled “No proxy for:”.

# S. DMG benchmark

## *S.1 What can I expect from the DMG in terms of performance?*

A series of tests has been realized on several platforms in order to measure the rapidity of the DMG components. Xprint and all the DMG components were installed on the same machine. This benchmark involves these platforms with these hardware characteristics.

| ***AIX d241s067 2 5 00521FDA4C00*** | ***Linux d241l001 2.6.5-7.97-default #1 Fri Jul 2 14:21:59 UTC 2004 i686 athlon i386 GNU/Linux*** | ***SunOS d241s088 5.10 Generic sun4us sparc FJSV,GPUS*** |
|---|---|---|
| System Model: IBM,7029-6E3<br>Processor Type: PowerPC_POWER4<br>Number Of Processors: 1<br>Processor Clock Speed: 1200 MHz<br>CPU Type: 64-bit<br>Kernel Type: 32-bit<br>Memory Size: 1024 MB | model name : AMD Athlon(tm) XP 2400+<br>cpu MHz : 2000.294<br>cache size : 256 KB<br>bogomips : 3940.35<br>Memory size: 1500 MB | System Configuration: Sun Microsystems sun4us Fujitsu Siemens PRIMEPOWER 200 2x SPARC64 IV 702MHz<br>System clock frequency: 100 MHz<br>Memory size: 2048 Megabytes<br>==========<br>CPUs<br>==========<br><br>Run Ecache CPU CPU<br>Brd CPU Module MHz MB Impl. Mask<br>--- --- ------- ----- ------ ------ ----<br>0 0 0 702 4.0 4 0.7<br>0 1 1 702 4.0 4 0.7 |

The benchmark is divided in three steps :

- On a client machine, open two DMG monitoring windows, one on the jobs and one on the devices with a refresh interval of 1 second.

- Spool in 200 jobs with no explicit destination on 5 serial devices (/dev/null) whose the spool out is set to OFF and measure how long it takes

- Switch the spool out attribute of all the devices to ON and measure how long it takes until all the jobs are printed.

These tests have been performed using shell scripts that may be ordered on request for your convenience in case you need to test another environment.

Here are the test results

| *Machine* | *Spoolin Time hh:mm:ss.cc* | *Spoolout Time hh:mm:ss.cc* |
|---|---|---|
| **Aix** | **00:00:40.94** | **00:01:05.23** |
| **Linux** | **00:00:08.57** | **00:00:15.43** |
| **Solaris** | **00:00:15.81** | **00:00:26.43** |

# T. Xprint Environment Variables

## *T.1 What are the available Xprint environment variables that can be used to tune the system ?*

**XP_DESTIN**
**Context**: official and documented interface from Xprint 1.2A / Spool 4.1A
**Description**: specifies a list of devices where to print a job if no destination is explicitly given in -de (the job will only be printed on one device of the list)
**Initialisation time**: before xpadd -job
**Possible values**: list of device names, separated by space characters
**Behaviour if unspecified**: the default destination of the submission host is used
**Reference**: xpadd -job -de in Xprint Reference Manual

**XP_VR**
**Context**: official and documented interface from Xprint 2.0A / Spool 4.2A
**Description**: specifies the version of Xprint in which the output of the commands xpshow and xpstat should be returned
**Initialisation time**: before xpshow or xpstat
**Possible values**: 01.2B00 02.0A00 02.0B00 05.0A00
**Behaviour if unspecified**: the format of the installed version is used
**Reference**: xpshow / xpstat in the Reference Manual of Xprint

**XP_FS**
**Context**: official and documented interface from Xprint 2.0A / Spool 4.2A
**Description**: specifies the field separator in the output of xpshow with selective display.
**Initialisation time**: before xpshow
**Possible values**: any character
**Behaviour if unspecified**: the tabulation chracter is used
**Reference**: xpshow in the Reference Manual of Xprint

**XP_LS**
**Context**: official and documented interface from Xprint 2.0A / Spool 4.2A
**Description**: specifies the separator between the elements of a list attribute in the output of xpshow with selective display.
**Initialisation time**: before xpshow
**Possible values**: any character
**Behaviour if unspecified**: the space chracter is used
**Reference**: xpshow in the Reference Manual of Xprint

**XP_FW**
**Context**: official and documented interface from Xprint 2.0A / Spool 4.2A
**Description**: specifies the width of the fields in the output of xpshow with selective display.
**Initialisation time**: before xpshow
**Possible values**: any numeric value; if set to zero, the fields are displayed in full length.
**Behaviour if unspecified**: 7 is used
**Reference**: xpshow in the Reference Manual of Xprint

**XP_DISC_TMOUT**
**Context**: Variable introduced in a patch (no official EKS) for Steyr-Puch in Spool 4.2A00

**Description**: specifies the maximum time in seconds spent on flushing data returned by a LAN printer when closing the connection. The variable was supported in the function taclan_disconnect(). As this function is no longer called in the recent versions of Xprint, the variable is no longer supported.
**Initialisation time**: before xpstart on the host where the supervisor runs
**Possible values**: any numeric value; if set to zero, the fields are displayed in full length.
**Behaviour if unspecified**: 60 is used
**Reference**:

**LPDEST**
**Context**: XPG3 emulation
**Description**: default destination for the lp command.
**Initialisation time**: before calling lp
**Possible values**: the name of a Xprint device or device group
**Behaviour if unspecified**: 60 is used
**Reference**:

**XPSP_DB_NBCONN**
**Context**: undocumented variable introduced in Spool 4.2B/Xprint 2.0B
**Description**: specifies the maximum number of parallel connexions used by the DBman2 process during the propagation processing.
**Initialisation time**: before xpstart
**Possible values**: between 1 and 128
**Behaviour if unspecified**: The default value is 10.
**Reference**: not documented seeing that only for specific needs (turnaround, ...)

**XPSP_DB_CBSIZE**
**Context**: undocumented variable introduced in Spool 4.2B/Xprint 2.0B
**Description**: specifies the suggested size of the cyclic buffer used by the DBman2 process during the propagation processing. This buffer is used to store and concatenate the DB request.
**Initialisation time**: before xpstart
**Possible values**: any realistic size in bytes
**Behaviour if unspecified**: The default value is 32Kbytes.
**Reference**: not documented seeing that only for specific needs (turnaround, ...)

**XPSP_DB_CBMINSIZE**
**Context**: undocumented variable introduced in Spool 4.2B/Xprint 2.0B
**Description**: specifies the mandatory minimal size of the cyclic buffer used by the DBman2 process during the propagation processing. The mecanism of buffer allocation is based on: first try to allocate the XPSP_DB_DBSIZE bytes. If this malloc failed, the size is decreased step by step downto the XPSP_DB_CBMINSIZE size. If this size cannot be allocated, the DBman2 aborts its start-up.
**Initialisation time**: before xpstart
**Possible values**: any realistic size in bytes but less than XPSP_DB_CBSIZE (if the value is higher, XPSP_CB_SIZE value is used as correct value).
**Behaviour if unspecified**: The default value is 5Kbytes.
**Reference**: not documented seeing that only for specific needs (turnaround, ...)

**XPSP_DB_MAX_LOOP**
**Context**: undocumented variable introduced in Xprint 6.0A
**Description**: specifies the number of retry used by the DBman2 process during the propagation processing in order to wait for pending connections.
**Initialisation time**: before xpstart
**Possible values**: any realistic number representing maximum waiting time in seconds.

**Behaviour if unspecified**: The default value is 20 seconds.
**Reference**: not documented seeing that only for specific needs (turnaround, ...)

**XPSP_DBCHECK**
**Context**: documented variable introduced in Xprint 6.0A
**Description**: specifies if the startup of Xprint should test the DB consistency in any case or never (value "NO").
**Initialisation time**: before xpstart
**Possible values**: "NO" means never checks the DB, other value means checks at each startup.
**Behaviour if unspecified**: If not set, the DB is checked only if abnormal termination of the previous session.
**Reference**:

**XP_LANDEV_TOUT**
**Context:** official since Xprint 5.0A
**Description:** timeout in seconds used for the check of the address of a LAN printer
**Initialisation time:** before xpadd/xpmod -dev
**Possible values:** from 0 to 900
**Behaviour if unspecified:** timeout of 30 seconds is used
**Reference:**

**XP_SPV_BY_DFTSRV**
**Context:** official since Xprint 5.0A
**Description:** maximum number of supervisor by default server
**Initialisation time:** before xpadd -dev
**Possible values:** from 1 to 15
**Behaviour if unspecified:** 3 is used
**Reference:**

**XP_DEV_BY_DFTSPV**
**Context:** official since Xprint 5.0A
**Description:** maxumum number of device by default supervisor
**Initialisation time:** before xpadd -dev
**Possible values:** from 1 to 15
**Behaviour if unspecified:** 15 is used
**Reference:**

**XMSNIHELPPATH**
**Context:** official since Xprint 5.0A
**Description:** path to help texts of SNI Help product
**Initialisation time:** before mais
**Possible values:** any path
**Behaviour if unspecified:** path
/usr/lib/%L/%T/%B/%F%S:/usr/lib/X11/%l/%T/%B/%F%S:/usr/lib/X11/%T/%B/%F%S
is used
**Reference:**

**XPRINT_PATH**
**Context:** official sincd Xprint 5.0A
**Description:** path to Xprint product, used to find Mercator binaries
**Initialisation time:** before mais
**Possible values:** any

**Behaviour if unspecified:** /var/spool/Xprint/config is used
**Reference:**

**LANG**
**Context**: Official and documented
**Description**: This variable is used in union with the `NLSPATH` environment variable. This variable specifies the language in which the Xprint messages must appear to the user.
**Initialisation Time**: This variable could be set at any time.
**Possible Values**: The possible values are related to the English and German languages; but the exact value is machine dependant:
On `AIX` systems: `LANG=en_US` or `LANG=de_DE`
On `windows NT` systems: `LANG=C` or `LANG=De`
On `HP_UX` systems: `LANG=en_US.ISO88591` or `LANG=de_DE.ISO88591`
On `DEC` systems: `LANG=en_US.ISO88591` or `LANG=de_DE.ISO88591`
On `SCO` systems: `LANG=en_US.ascii` or `LANG=de_DE.ISO8859-1`
On other systems: `LANG=En_US.ASCII` or `LANG=De`
**Behaviour if unspecified**: The default language, 'English' is used; so the Xprint messages appears in 'English'.
**Reference**: Product Overview in `Xprint V50.A Reference Manual (1)`
and Administering Xprint in `Xprint V50.A User and Administrator Guide`

**NLSPATH**
**Context**: Official and documented
**Description**: This variable is set in union with the `LANG` environment variable. This variable specifies where the system could find the Xprint message files. Those message files are language dependant.
**Initialisation Time**: This variable could be set at any time.
**Possible Values**: The beginning value of this possible path value is related to the Xprint installation path: (/var/spool/Xprint/config), but the exact value is machine dependant:
On `AIX` systems: `NLSPATH=$NLSPATH:$XPRINT_HOME/MSG/%L/%N:`
`var/spool/Xprint/config/mercator/MSG/%L/%N`
On `Windows NT` systems: `NLSPATH=$NLSPATH:$XPRINT_HOME/MSG/~L/~N.cat:`
`var/spool/Xprint/config/mercator/MSG/~L/~N.cat`
On other systems: `NLSPATH=$NLSPATH:$XPRINT_HOME/MSG/%l/%N.cat:`
`var/spool/Xprint/config/mercator/MSG/%l/%N.cat`
**Behaviour if unspecified**: The default path to the 'English' message files is used.
**Reference**: Setting the Language for the Xprint System in `Xprint V50.A User and Administrator Guide`

**XP_DUPLOG**
**Context**: Present since Xprint version 50a00 and not documented.
**Description**: The set of this environment variable will write in logging files all log messages, even if some consecutive messages are identical.
**Initialisation Time**: This variable could be set at any time.
**Possible Values**: Any value, this environment variable must only be set and exported, with a value different from empty string (`""`).
**Behaviour if unspecified**: If this environment variable is not set, the default behaviour is done: when a same logging message is send many times consecutively, the message is written one time in the logging file and for each occurrence of this message, a '.' is written in the logging file. When a different message has to be written in the logging file, before this new message, the previous one is written again with its number of occurrence:

"The log message <MESSAGE> have been sent <X> times."

This behaviour have been described in the Xprint V05.0A00 release note.
**Reference**: -

**DBG_XPPOLL**
**Context**: Present since Xprint version 4.1 and not documented
**Description**: The set of this environment variable will engage the debugging mechanism in the different calling entities when executing `xppoll` command.
**Initialisation Time**: Before executing `xppoll` command.
**Possible Values**: Any value, this environment variable must only be set and exported, with a value different from empty string (`""`).
**Behaviour if unspecified**: No debugging is possible for the `xppoll` command.
**Reference**: -

**XP_JTP**
**Context**: not officially released variable. It has been inserted in Xprint 5.0A00
**Description**: Specifies the name of a default job template. The template will be applied on all jobs submitted with that variable set and as long as the job does not reference any job template. The job template has to be public. The behaviour is equivalent to xpadd -job -te. Settings may thus be overwritten by the job. The variable can also be defined while defining a gateway in which case the corresponding gateway will set up the variable in its environment while starting up.
**Initialisation time**: before xpadd -job or while defining a gateway.
**Possible values**: the name of a an existing public job template.
**Behaviour if unspecified**: no job template is applied
**Reference**: xpadd -job -de in Xprint Reference Manual
xpadd -gtw -op

**XP_NFS_SUPPORT**
**Context**: variable introduced for the Xprint support of nfs, topic appended to Xprint 5.0A00 and officially released with Xprint 5.1B00.
**Description**: The nfs support can be disabled by having this variable set. This should only be considered as turn around to Xprint deficiencies. The nfs support avoids excessive file transfer between supervisor and client host.
**Initialisation time**: before xpadd -job
**Possible values**: Any value other than 1 disables the nfs support.
**Behaviour if unspecified**: the nfs support is enabled
**Reference**: xpadd -job -de in Xprint Reference Manual

**XP_KEY**
**Context**: not officially released but available since Xprint 5.1B00
**Description**: Software protection relies on key disks for SNI platforms. This offers less functionality than the Xprint proprietary software. The Xprint protection can be enabled on SNI platforms by removing the key disks on the SNI platforms and having the variable XP_KEY set.
**Initialisation time**: before xpstart, and any xpadd command
**Possible values**: any value is ignored. Only the existence of the variable is taken into account
**Behaviour if unspecified**: Software protection relies on key disks.
**Reference**: xpadd in Xprint Reference Manual
xpstart

**XP_MOUNT**
**Context**: Introduced for the nfs support and officially released with Xprint 5.1B00
**Description**: The variable specifies the full path and the binary to be considered in order to collect information from the system about mounted file systems.

**Initialisation time**: before xpadd -job, before xpstart so that the supervisor has access to the information
**Possible values**: full path name including the name of an equivalent mount command
**Behaviour if unspecified**: the standard mount command with its path
**Reference**: xpadd -job -de in Xprint Reference Manual

**XP_STOP_FAST**
**Context**: Introduced in Sispl start/stop to reduce the Xprint shutdown at shutdown host time. It can b used also to force the Xprint start-up.
**Description**: When the variable is set before host booting, it forces to start Xprint even if the previous session was not correctly ended. When the variable is set before host shutdown, the start/stop script doesn't wait for all Xprint termination process end.
**Initialisation time**: before shutdown/start-up of the host.
**Possible values**: any value
**Behaviour if unspecified**: the standard Xprint start/stop behaviour.
**Reference**: -

**XPSP_STARTUP_ENTITIES**
**Context**: Introduced in V6.0A to limit the Xprint start-up to only some entities.
**Description**: If set to '0', only the daemon and data base services are activated during Xprint start-up. The other server, supervisor, printer or gateway entities are not automatically activated. However, if you have specified a start-up script in the host object, this script will be executed and will be able to start any Xprint entities. So, if the XPSP_STARTUP_ENTITIES is set to '1', this script will not be executed.
**Initialisation time**: before xpstart
**Possible values**: Only value '0' and '1' is relevant at this time.
**Behaviour if unspecified**: the default xpstart command behaviour is kept.
**Reference**: None

**XPSP_BACKUP_INTERVAL**
**Context**: official and documented interface from Xprint 6.0A00.
**Description**: specifies the time interval between 2 automatic backups.
**Initialisation time**: before xpstart
**Possible values**: 1 to infinity specified in minutes.
**Behaviour if unspecified**: 30 minutes.
**Reference**: None

**XP_LOCALPRIO**
**Context**: Introduced in V6.0A to modify the device selection in a device list.
**Description**: If set, the priority for destination in a candidate printer list will be given first to the local device (the device that is administrated on the local host) and second on the load level.
This variable is irrelevant if XP_DLPRIO is set (see below)
**Initialisation time**: before xpadd –job and start-up of Mercator
**Possible values**: any value
**Behaviour if unspecified**: the default device selection (on load level) behaviour is kept.
**Reference**: None

**XP_DLPRIO**
**Context**: Introduced in V6.0A to modify the device selection in a device group.
**Description**: If set, the order of the device list in the device group is used to try the candidate devices. If set, this variable 'hides' XP_LOCALPRIO
**Initialisation time**: before xpadd -job
**Possible values**: any value
**Behaviour if unspecified**: the default device selection (on load level) behaviour is kept.

**Reference**: None

**XP_SHOW_PERMANENT_ID**
**Context**: Introduced in V7.0A to show the new permanent job identifier at job submission.
**Description**: If set, the client receives a permanent job identifier instead of a local job alias when a xpadd, xpdel and xpmod are submitted.
**Initialisation time**: before xpadd -job, xpmod -job or xpdel -job
**Possible values**: Any value other than 1 disables this functionnality.
**Behaviour if unspecified**: the default behaviour is kept (local job alias is shown).
**Reference**: None

**XP_SPEC_OBJ**
**Context**: Introduced in V7.0A to enable the use of special objects (Xprint objects whose names begin with the underscore).
**Description**: The use of Xprint special objects is activated by setting this environment variable with the value "XPRINT_SPECIAL_OBJECTS_ALLOWED". In that case, the Xprint naming convention is modified so that special objects can be handled like any other standard Xprint objects of the same type. When this environment variable is not set or if it is set with the wrong value, any creation of object bearing a name beginning with underscore is refused and such objects already existing in the system are not visible nor accessible any more.
**Initialisation time**: before the xprint command that refers to special objects.
**Possible values**: Only the value "XPRINT_SPECIAL_OBJECTS_ALLOWED" is significant. Other values are ignored.
**Behaviour if unspecified**: The default Xprint naming convention is kept. It is impossible to create, handle or view Xprint special objects.
**Reference**: None

**XP_DB_MAX_RETRY**
**Context**: TD #1443 – Pble at OSRAM customer – Bad mastering take over
**Description**: This variable determines the maximum number of retry when a DB connection is busy.
**Initialisation time**: Before xpstart
**Possible values**: max number of retry when DB connection busy
**Behaviour if unspecified**: value is 90
**Reference**: Release note Xprint 7.0A20 / PRISMAnet 7.02.00

**XP_DBSLEEP_SYNCH**
**Context**: Pble on Linux – DBman2 doesn't start
**Description**: This variable determines a sleep to be done before launch DBman2 process.
**Initialisation time**: Before xpstart
**Possible values**: 0-99
**Behaviour if unspecified**: 0
**Reference**: After PRISMAnet 7.02.02

**XP_NOTIF_TIMESTAMP**
**Context**: When a user requires notifications (job, device) via the FILE method, the timestamp is never put in the event message.
**Description**: This variable determines where to put the timestamp in the notification message.
**Initialisation time**: Before xpstart
**Possible values**: NONE, BEGIN, END
**Behaviour if unspecified**: BEGIN
**Reference**: From Xprint 8.0B00

## T.2 Mercator Environment Variables

**XPSP_MERCATOR_NBDISP**
**Context**: official and documented interface from Xprint 6.0A00
**Description**: specifies the maximum number of mdxprint that can be running at the same time for a specified session of Mercator
**Initialisation time**: before running Mercator
**Possible values**: between 1 and infinity
**Behaviour if unspecified**: maximum of 15 mdxprints
**Reference**: None

**MERCATOR_DEBUG**
**Context**: official and documented interface from Xprint 5.0A00
**Description**: specifies if Mercator is launched with debugging or no
**Initialisation time**: before running Mercator
**Possible values**: 1 or YES
**Behaviour if unspecified**: no debugging
**Reference**: None

**MERCATOR_DEV_NAME**
**Context**: official and documented interface from PRISMAnet 7.0A00 – EKS #2
Already available from PRISMAnet V6, after EKS 4 on HP with separate mais binary
**Description**: only on Unix, specifies the device name length visible on the mercator map
**Initialisation time**: before running Mercator
**Possible values**: from 8 up to 25
**Behaviour if unspecified**: default 8 characters for device name lengthe on mercator map
**Reference**: None

## T.3 External Environment Variables

These variables are in the Unix environment and used by Xprint

**XAPPLRESDIR**
**Context**: Introduced in the Xprint V5.2A00 for the default resource path used in mercator.
**Description**: This motif variable specifies the full path where find the applications default resource files.
**Initialisation time**: before mais
**Possible values**: any path
**Behaviour**: This user environment defined path is set or completed with the dedicated mercator part: `XPRINT_PATH/mercator/app_defaults`
**Reference**:

# U. Xprint migration aspects

## *U.1 Are there different migration scenarios for upgrades from Xprint 5.2 to 6.0 to 7.0 to 8.0 ?*

No, there is no difference. The migration aspects between the version 5.2 and a higher version are detailed in the Xprint release note in sections 8.4.1 and 8.4.2

There is only one exception on windows platforms. Here are the steps to follow when migrating from Xprint 5.2 to Xprint 8 on Windows

- Backup of DB.local, SV, TMP directories if you wish to migrate your existing jobs
- Backup your resources and PCL directories if you have specified custom PCLs and/or custom resources
- Uninstall the version 5.2 (control pannel->add/remove programs)
- Uninstall the MKS Platform Components 7.x
- Install the new Xprint 8.0
- Restore your backup into the current Xprint’s root directory
- In the "bin" directory of Xprint (default: "C:\Program Files\Xprint\bin"), execute the command "DBmigrate -l" to migrate your backed up database
- Start Xprint

# V. Extended options

## V.1 What are the available extended options ?

The table below lists all the extended options that are used for both tunning/internal purposes.

| Xprint extended option name | Xprint object | Description |
|---|---|---|
| XP_FORCE_PRINTING | JOB | Used in multi-document jobs to ignore missing documents. Without this option, a job is put in state SUSPEND if a data file is not available at printing time. With this option, missing files are ignored (the available files are printed) and if a trailer page has been requested, an error message is printed on it. |
| XP_FORCE_SILENT_PRINTING | JOB | Forces the silent printing to be activated in the context of printing a selection of pages.<br>Pay attention to the fact that it is only valid if the selection is done in only one range.<br>Ex: ps 12,11-13,10-25 (only one range: 10-25)<br>ps 10-15,30-35 (2 ranges) |
| XP_SHOW_PERMANENT_ID | JOB | Forces Xprint to return the permanent job ID when a new job is submitted |
| XP_CM_POLL_TIME | HOST | Sets the period for devices and hosts state refreshing in the "Cache" area. This time determines the maximum time before detection of a host no longer reachable or of a DEVICE_ERROR state occurring on another host than the SNMP system. The value must be a number expressing the time in seconds. The default value is "300" . The value "0" disables this refresh operation and could lead to incorrect states of devices and hosts. |
| XP_CM_DISABLE_JOBS | HOST | Disables the monitoring of jobs via the SNMP agent. A non null value disables the monitoring of jobs and a value of "0" resets to the default behaviour |
| XP_ALIAS_LIMIT | HOST | Sets the maximum number of jobs that can be submitted on a host. |
| XP_SNMP_SYNC_TIME | HOST | Sets the validity period for the SNMP agent copy of the Xprint information. Any access to Xprint agent after this time will enforce a resynchronization of the SNMP agent copy with the "Cache Area". |
| XP_PAGE_NBR | JOB | To specify how many pages are contained in a document to be printed out. |
| XP_PAGE_THRESHOLD | DEV | Sets the maximum number of pages allowed for a specific device. |
| XP_PAGE_ALT_DEVICE | DEV | Contains the name of an alternate device on which the jobs will be automatically redirected if the specified destination has reached its XP_PAGE_TRESHOLD. |
| COLLECTOR_HOST | LRS | DMG LRS for internal use only |
| COLLECTOR_PORT | LRS | DMG LRS for internal use only |
| GUISRV_HOST | LRS | DMG LRS for internal use only |
| GUISRV_PORT | LRS | DMG LRS for internal use only |

| | | |
| --- | --- | --- |
| GUISRV_PATH | LRS | DMG LRS for internal use only |
| DISTRIBUTOR_HOST | LRS | DMG LRS for internal use only |

# W. Useful links to get support

**UNIX**

***Sun***

http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access

***Win***

http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access

***HP***

Packages libraries
http://hpux.cs.utah.edu/hppd/

Support
http://www.hp.com/country/us/en/support.html?pageDisplay=support

***AIX***

http://www.ibm.com/support/us/

**Linux**

**Suse**

https://portal.suse.com/PM/page/login.pm?portal_language=en

**Redhat**

https://www.redhat.com/apps/support/

# X. Useful hints

## X.1 How can I search for a string in the DMG window using a Firefox Web browser ?

Hit simultenaously the control key and the letter “f” (CTRL/f). This will give you the possibility to enter the text you are looking for with a few search options. This feature is available in any firefox window

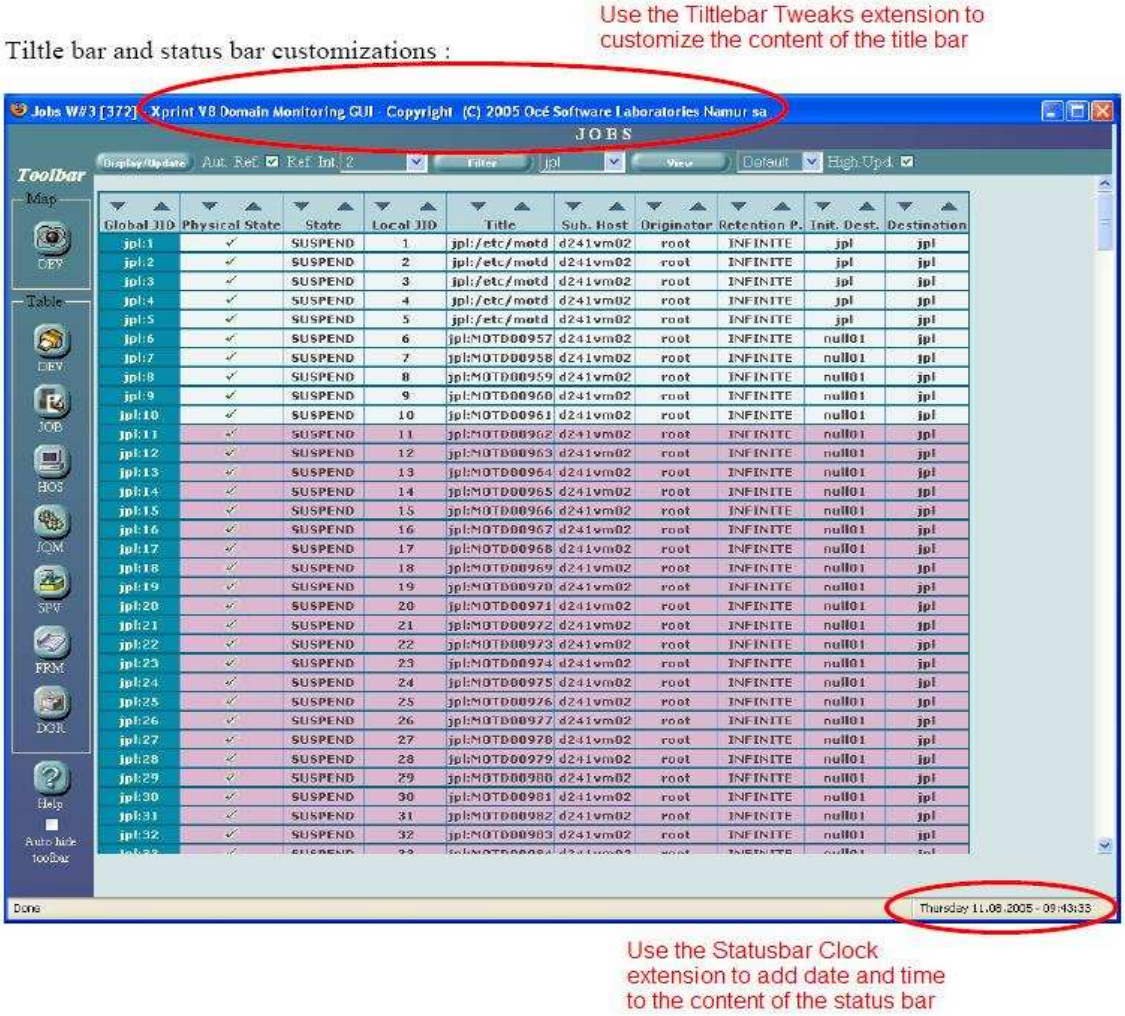
## X.2 How can I change the text size in the DMG window using a Firefox Web browser ?

Hit simultenaously the control key and the key “+” (CTRL/+). This will increase the size of the text displayed on the screen

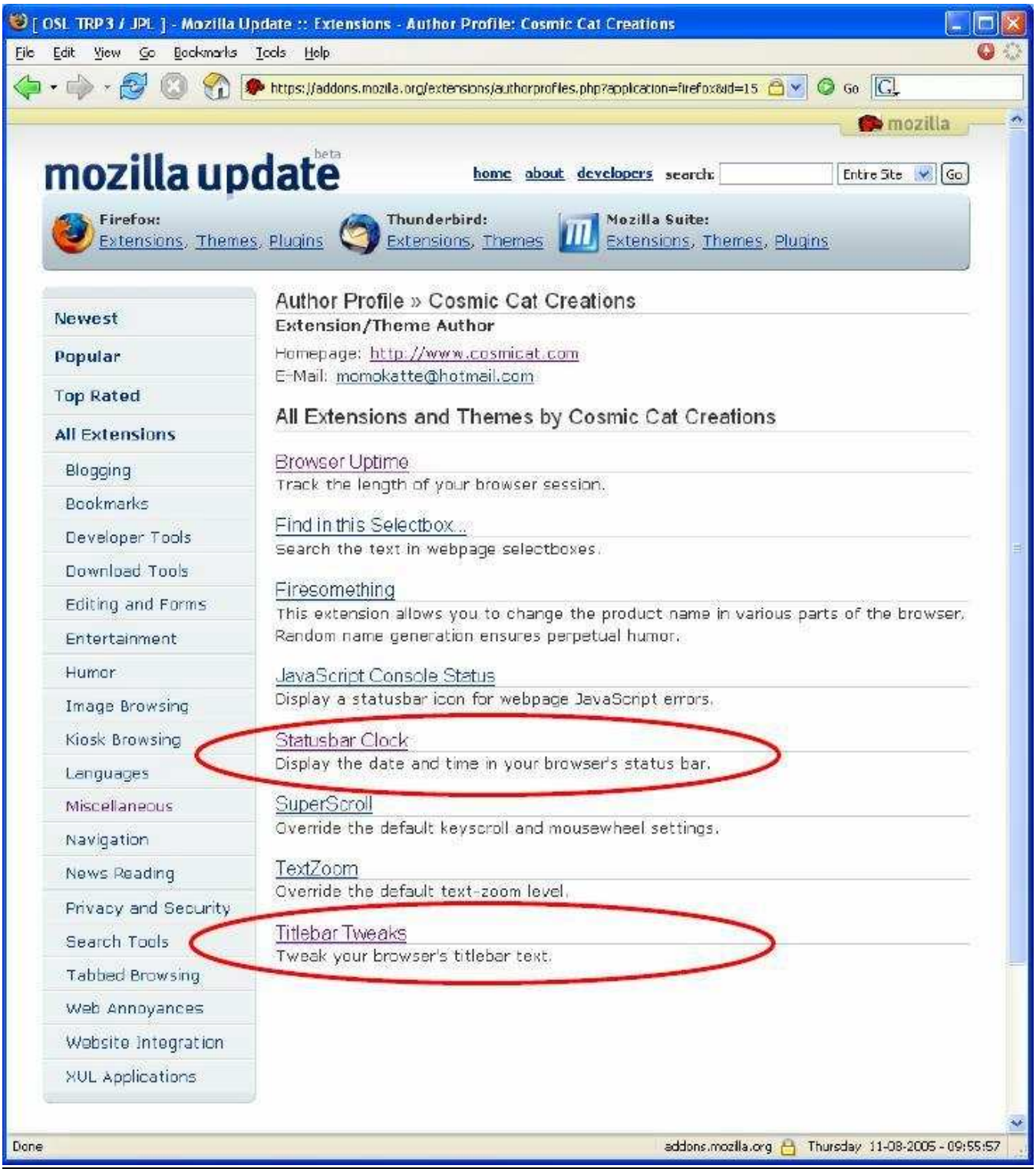
Use the combination (CTRL/-) to decrease the size of the text displayed on the screen.

## X.3 How can I customize my Firefox Web browser ?

Tiltle bar and status bar customizations are possible:




In order to apply these customizations, you need to download Firefox extensions from https://addons.mozilla.org/extensions/authorprofiles.php?application=firefox&id=15


[ OSL TRP3 / JPL ] - Mozilla Update :: Extensions - Author Profile: Cosmic Cat Creations
File Edit View Go Bookmarks Tools Help
https://addons.mozilla.org/extensions/authorprofiles.php?application=firefox&id=15
mozilla
mozilla update beta
home about developers search: Entire Site Go
Firefox: Extensions, Themes, Plugins
Thunderbird: Extensions, Themes
Mozilla Suite: Extensions, Themes, Plugins
Newest
Popular
Top Rated
All Extensions
Blogging
Bookmarks
Developer Tools
Download Tools
Editing and Forms
Entertainment
Humor
Image Browsing
Kiosk Browsing
Languages
Miscellaneous
Navigation
News Reading
Privacy and Security
Search Tools
Tabbed Browsing
Web Annoyances
Website Integration
XUL Applications
Author Profile » Cosmic Cat Creations
Extension/Theme Author
Homepage: http://www.cosmicat.com
E-Mail: momokatte@hotmail.com
All Extensions and Themes by Cosmic Cat Creations
Browser Uptime
Track the length of your browser session.
Find in this Selectbox...
Search the text in webpage selectboxes.
Firesomething
This extension allows you to change the product name in various parts of the browser. Random name generation ensures perpetual humor.
JavaScript Console Status
Display a statusbar icon for webpage JavaScript errors.
Statusbar Clock
Display the date and time in your browser's status bar.
SuperScroll
Override the default keyscroll and mousewheel settings.
TextZoom
Override the default text-zoom level.
Titlebar Tweaks
Tweak your browser's titlebar text.
Done
addons.mozilla.org
Thursday 11-08-2005 - 09:55:57

# Y. Limitations and restrictions

Please have a look at the following sections of the manuals:

- Section 10 of the Xprint release note
- Section 9 of the DMG Server release note
- Sections 4.3.2 and 7.5.3 of the Xprint reference manual

# Z. Operating systems tips

## *Z.1 How to create, modify or delete a windows service ?*

To manage the windows services, you can use the command sc.exe which is available on each Windows system.

The following example creates a service named 'newservice' on the local computer as an auto-start service. It has dependencies on the Xprint service. Note that you must add quotes around the list of space-separated dependencies.

```
      sc create newservice binpath= "c:\Program Files\NewService\newserv.exe" type=
own start= auto depend= Xprint
```

The following command allows to delete the service Lip2PCL on the computer called \\remoteserver :

```
      sc \\remoteserver delete Lip2PCL
```

The following command adds a dependency in relation to the Xprint service for the service named "Lip2Pcl" on the local computer :

```
      sc config Lip2PCL depend= Xprint
```

By this means, Xprint will always be started before the service Lip2Pcl. Moreover, we will not be able to stop Xprint without stopping Lip2Pcl before.

## *Z.2 Why are there processes consuming most of the CPU resources on HP-UX Itanium 11.23 ?*

This might be due to the new socket cathing mechanism which is in contradiction with the SO_LINGER tcp-ip sockets flag. At the time of writing, it is necessary to disable the socket catching mechanism to avoid communication problems over the network. To disable the socket catching, you can use this command:

Ndd –set /dev/sockets socket_catching_tcp 0